

RELATIVE ACCURACY TEST AUDIT #10731R

August 2010

PERFORMED FOR:

Covanta Projects, Inc.

at

**Huntington Resource Recovery Facility
Units 1, 2, and 3 SDA Inlets and FF Outlets
Huntington, New York**

by

**TESTAR, Inc.
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REPORT CERTIFICATION #10731R

I hereby certify that I have personally examined and am familiar with the information submitted herein. Based upon my own knowledge and my inquiry of those individuals responsible for obtaining the information presented, the foregoing information is true, accurate and complete. I am aware that this information is being requested for the purpose of determining compliance with local, state, and federal laws and may be submitted to appropriate governmental regulatory agencies for those purposes. I am aware that there are significant penalties for submitting false information to such agencies, including the possibility of fine and imprisonment.

Signature



Date:

9/27/12

Mr. Gary Williams, PE

Director

Professional Engineer, State of New York

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1 INTRODUCTION

1.1 General

Covanta Projects, Inc. contracted TESTAR, Inc. to conduct an Annual Relative Accuracy Test Audit on the CEM systems serving the SDA Inlet and FF Outlet of Units 1, 2, and 3. The testing was performed at the Huntington Resource Recovery Facility in Huntington, New York. The relative accuracy test results satisfied the requirements of 40 CFR Part 60, Appendix B and F. The test program was conducted on August 3, 4, and 6, 2010 by TESTAR under the supervision of Mr. Mark Ritchie of Covanta Projects, Inc.

1.2 Test Personnel

Table 1-1 presents the personnel from Covanta and TESTAR that were involved in the testing program.

Table 1-1
Test Personnel

Affiliation	Personnel Responsibility
Covanta Projects, Inc.	Mark Ritchie Test Coordinator
TESTAR, Inc.	Gary Williams Project Director
	Bill Harris CEM Operator
	Ritchie Perry Field Engineer
	Charles Nahrebecki Field Engineer

2 SUMMARY OF RESULTS

2.1 Report Organization

The results of the testing project are summarized in Section 2. The process tested is discussed in Section 3. The sampling and analytical methods utilized are discussed in Section 4 while the Quality Assurance/Quality Control results are presented in Section 5. Appendix A contains detailed results of the testing program. Appendix B contains Reference Method Field Data for O₂, CO₂, SO₂, NO_x and CO. Appendix C contains the Source Data CEMS Printouts for O₂, CO₂, SO₂, NO_x and CO. Appendix D contains the reference method field data used for calculating flow rates and Appendix E contains all reference method calibration data. Refer to the Table of Contents and the List of Tables for a complete reference with appropriate page numbers.

2.2 Presentation of Results

Table 2-1 presents the results of the Relative Accuracy Tests. A more detailed summary of sampling gas parameters is presented in Appendix A.

Table 2-1
Relative Accuracy Test Audit Summary

Parameter	Serial Number	Location	Units	Result	Specification
Oxygen	3335	Unit 1 Inlet	Dry Volume %	0.5%	$\leq 1.0\%$ Absolute Mean Difference ²
	WO4036 O2	Unit 1 Outlet	Dry Volume %	0.0%	$\leq 1.0\%$ Absolute Mean Difference ²
Carbon Dioxide	A08-362	Unit 1 Inlet	Dry Volume %	0.4%	$\leq 1.0\%$ Absolute Mean Difference ²
	A08-361	Unit 1 Outlet	Dry Volume %	0.2%	$\leq 1.0\%$ Absolute Mean Difference ²
Sulfur Dioxide	AX-921-9646-2	Unit 1 Inlet	ppm @ 7% O ₂	2.6%	$\leq 20\%$ Relative Accuracy ¹
	AX-921-9646-1	Unit 1 Outlet	ppm @ 7% O ₂	1.1%	$\leq 20\%$ of applicable Standard ¹
Nitrogen Oxides	WO4036 NOx	Unit 1 Outlet	ppm @ 7% O ₂	1.9%	$\leq 20\%$ Relative Accuracy ¹
			Ib NO _x /hr	3.7%	$\leq 20\%$ Relative Accuracy ⁴
Carbon Monoxide	0636119863L	Unit 1 Outlet High	ppm @ 7% O ₂	7.4%	$\leq 10\%$ Relative Accuracy ³
	0636119863H	Unit 1 Outlet Low	ppm @ 7% O ₂	7.4%	$\leq 10\%$ Relative Accuracy ³
Oxygen	3337	Unit 2 Inlet	Dry Volume %	0.5%	$\leq 1.0\%$ Absolute Mean Difference ²
	WO4037 O2	Unit 2 Outlet	Dry Volume %	0.1%	$\leq 1.0\%$ Absolute Mean Difference ²
Carbon Dioxide	A08-369	Unit 2 Inlet	Dry Volume %	0.0%	$\leq 1.0\%$ Absolute Mean Difference ²
	A08-363	Unit 2 Outlet	Dry Volume %	0.0%	$\leq 1.0\%$ Absolute Mean Difference ²
Sulfur Dioxide	AX-921-9646-4	Unit 2 Inlet	ppm @ 7% O ₂	4.8%	$\leq 20\%$ Relative Accuracy ¹
	AX-921-9646-3	Unit 2 Outlet	ppm @ 7% O ₂	0.0%	$\leq 20\%$ of applicable Standard ¹
Nitrogen Oxides	WO4037 NOx	Unit 2 Outlet	ppm @ 7% O ₂	1.9%	$\leq 20\%$ Relative Accuracy ¹
			Ib NO _x /hr	4.0%	$\leq 20\%$ Relative Accuracy ⁴
Carbon Monoxide	0636119864H	Unit 2 Outlet High	ppm @ 7% O ₂	3.9%	$\leq 5\%$ of Standard ³
	0636119864L	Unit 2 Outlet Low	ppm @ 7% O ₂	3.9%	$\leq 5\%$ of Standard ³
Oxygen	3343	Unit 3 Inlet	Dry Volume %	0.5%	$\leq 1.0\%$ Absolute Mean Difference ²
	WO4038 O2	Unit 3 Outlet	Dry Volume %	0.0%	$\leq 1.0\%$ Absolute Mean Difference ²
Carbon Dioxide	A08-367	Unit 3 Inlet	Dry Volume %	0.2%	$\leq 1.0\%$ Absolute Mean Difference ²
	A08-368	Unit 3 Outlet	Dry Volume %	0.1%	$\leq 1.0\%$ Absolute Mean Difference ²
Sulfur Dioxide	AX-921-9646-6	Unit 3 Inlet	ppm @ 7% O ₂	3.6%	$\leq 20\%$ Relative Accuracy ¹
	AX-921-9646-5	Unit 3 Outlet	ppm @ 7% O ₂	4.7%	$\leq 20\%$ of applicable Standard ¹
Nitrogen Oxides	WO 4038 NOx	Unit 3 Outlet	ppm @ 7% O ₂	3.1%	$\leq 20\%$ Relative Accuracy ¹
			Ib NO _x /hr	6.9%	$\leq 20\%$ Relative Accuracy ⁴
Carbon Monoxide	0636119865H	Unit 3 Outlet High	ppm @ 7% O ₂	8.2%	$\leq 10\%$ Relative Accuracy ³
	0636119865L	Unit 3 Outlet Low	ppm @ 7% O ₂	8.2%	$\leq 10\%$ Relative Accuracy ³

¹ 40CFR60, Appendix B, Performance Specification 2 for NO_x and SO₂, Section 13.2.

² 40CFR60, Appendix B, Performance Specification 3 for O₂ and CO₂, Section 13.2.

³ 40CFR60, Appendix B, Performance Specification 4A for CO, Section 13.2

⁴ 40CFR60, Appendix B, Performance Specification 6 for Continuous Emission Rate Monitoring Systems, Section 13.2.

3 PROCESS DESCRIPTION AND OPERATION

The Huntington Resource Recovery Facility processes up to 350,000 tons of solid waste each year, generating up to 27.5 megawatts of electricity. The facility was designed and built and is owned and operated by Covanta Projects, of Huntington, Inc. Each of the three (3) Martin GmbH waterwall furnaces has a nominal design capacity of 250 tons of waste per day. Waste is combusted at furnace temperatures exceeding 1,800 degrees Fahrenheit and reduced to an inert ash residue. Before leaving the facility, combustion air is directed through technologically advanced air pollution control equipment consisting of spray dryer absorbers (SDA), selective non-catalytic reduction (SCNR), carbon injection system, and fabric filter (FF) baghouses.

The CEMS serving Units 1, 2, and 3 consist of SO₂, NO_x, CO, O₂, and CO₂ analyzers, a dry extractive sampling system, opacity monitors, and a microcomputer based DAS. Descriptions of the analyzers are listed in **Table 3-1**.

**Table 3-1
Covanta CEMS Analyzers**

Pollutant Monitor	Unit	Location	Range	Analyzer	Serial Number
SO ₂	1	Inlet	0-500 ppm	Western Research 921	AX-921-9646-2
O ₂	1	Inlet	0-25%	Servomex 1420	3335
CO ₂	1	Inlet	0-20%	Siemens Ultramat	A08-362
CO	1	Stack	0-2000 ppm 0-200 ppm	TECO 48i	0636119863
SO ₂	1	Stack	0-200 ppm	Western Research 921	AX-921-9646-1
NO _x	1	Stack	0-500 ppm	Thermo Environmental 10S	WO4036 NOx
CO ₂	1	Stack	0-20 %	Siemens Ultramat	A08-361
O ₂	1	Stack	0-25 %	Servomex 1440	WO4036 O2
SO ₂	2	Inlet	0-500 ppm	Western Research 921	AX-921-9646-4
O ₂	2	Inlet	0-25%	Servomex 1420	3337
CO ₂	2	Inlet	0-20%	Siemens Ultramat	A08-369
CO	2	Stack	0-2000 ppm 0-200 ppm	TECO 48i	0636119864
SO ₂	2	Stack	0-200 ppm	Western Research 921	AX-921-9646-3
NO _x	2	Stack	0-500 ppm	Thermo Environmental 10S	WO4037 NOx
CO ₂	2	Stack	0-20 %	Siemens Ultramat	A08-363
O ₂	2	Stack	0-25 %	Servomex 1440	WO4037 O2
SO ₂	3	Inlet	0-500 ppm	Western Research 921	AX-921-9646-6
O ₂	3	Inlet	0-25%	Servomex 1420	3343
CO ₂	3	Inlet	0-20%	Siemens Ultramat	A08-367
CO	3	Stack	0-2000 ppm 0-200 ppm	TECO 48i	0636119865
SO ₂	3	Stack	0-200 ppm	Western Research 921	AX-921-9646-5
NO _x	3	Stack	0-500 ppm	Thermo Environmental 10S	WO4038 NOx
CO ₂	3	Stack	0-20 %	Siemens Ultramat	A08-368
O ₂	3	Stack	0-25 %	Servomex 1440	WO4038 O2

4 SAMPLING AND ANALYTICAL METHODS

TESTAR, Inc. was contracted to conduct a Relative Accuracy Test Audit on the CEM systems installed on the inlet and outlet of Units 1, 2, and 3. The testing was performed on the Covanta of Huntington CEMS.

4.1 Relative Accuracy Test Equipment

TESTAR's extractive measurement system and all sampling and data reduction procedures conform with the requirements of 40 CFR 60, Appendix B, Performance Specifications 2, 3, and 4A, and EPA Methods 3A, 6C, 7E, and 10 of 40 CFR 60, and the Quality Assurance Procedures of Appendix F. **Figure 4-1** presents a schematic of the reference measurement systems that was used at the test locations.

The effluent gas sample is conditioned to eliminate interference from water vapor and particulate matter before being introduced into each analyzer. All components of the sampling system that contact the sample are glass, stainless steel, or Teflon. A heated probe and particulate filter, heated sample lines, primary moisture removal trap, sample pump, secondary moisture removal system and distribution manifold board are used to deliver a sample of flue gas to the analyzers. The sampling probe and filter housing is constructed of Type 316 stainless steel and is heated to maintain the sample temperature above the dew point.

The condenser is an ice bath, Teflon or glass coil condenser that provides excellent condensate separation and optimum drying of the sample gas. A peristaltic pump continuously removes condensate from the Teflon coil.

The dry sample exiting the condenser is then transported through unheated 3/8-inch O.D. Teflon tubing by way of a Teflon-lined sample pump to the flow distribution manifold board, where the flow to the analyzers is monitored and controlled.

A three-way valve located on the manifold board delivers calibration gas to two locations: (1) immediately upstream of the analyzers for calibration error checks, and (2) at the outlet of the probe for the sampling system bias and calibration drift checks.

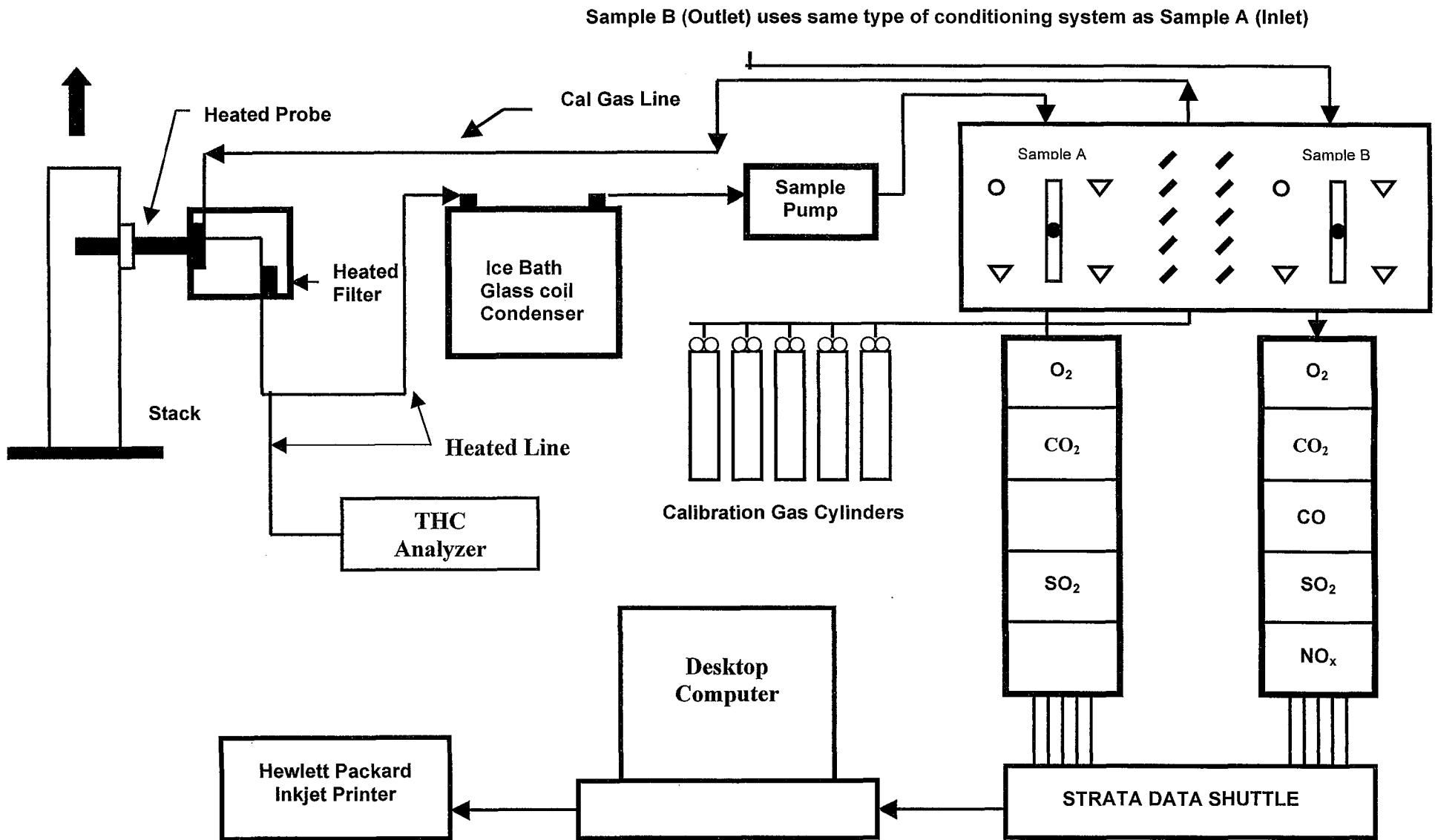


Figure 4-1. TESTAR Reference Method CEM System

Table 4-1 lists the gas analyzers that will be used during this test program.

Table 4-1
Reference Method Analyzers

Parameter	Analyzer	Model	Serial Number	Range	Operational Principle
SO ₂ Inlet	Bovar	721M	721M-8062-2	0-500ppm	Ultraviolet Differential Absorption
SO ₂ Outlet	Bovar	721M	721M-8064-6	0-100ppm	Ultraviolet Differential Absorption
O ₂ Inlet	California Analytical	100P	8K12007	0-25%	Paramagnetic
O ₂ Outlet	Servomex	1420B	1420/B175	0-25%	Paramagnetic
CO ₂ Outlet	California Analytical	ZRH	A6J836T	0-20%	NDIR
CO ₂ Inlet	Teledyne API	300M	224	0-20%	NDIR
CO Outlet	Thermo Environmental	48CHL	48CHL-60783-326	0-100ppm	Gas Filter Correlation
NO _x Outlet	Thermo Environmental	10S	10S-45502-274	0-500ppm	Chemiluminescence

4.2 RATA Test Procedures

The reference test method procedures used for the RATA test program are instrumental test methods. They were conducted in accordance with 40 CFR 60, Appendix B, Performance Specifications 2, 3, and 4A and Appendix F. Relative accuracies were calculated on a percent basis. To satisfy the RATA requirements of 40 CFR 60, Appendix B, the relative accuracy must not exceed 20.0 percent of the mean of the reference method or 10.0 percent of the applicable standard for NO_x, must not exceed 20.0 percent of the mean of the reference method or 20.0 percent of the applicable standard (low emitter) for SO₂, must not exceed 10.0 percent of the mean of the reference method, 5.0 percent of the applicable standard, or an absolute difference of $\pm 5\text{ppm}$ plus the confidence coefficient for CO. The relative accuracy of an O₂ or CO₂ analyzer must not exceed an absolute mean difference of ± 1.0 percent.

TESTAR, Inc. conducted the relative accuracy tests. The RATA was conducted while each unit operated at greater than 50% of capacity.

The traverse sampling points were located so as to establish a "measurement line" through the centroidal area of the duct. The test points for the relative accuracy tests were located at 16.7%, 50.0%, and 83.3% of the internal diameter of the duct. Figure 4-2 presents a schematic of the sampling point locations for the SDA inlet. Figure 4-3 presents a schematic of the sampling point locations for the FF outlet.

TESTAR used EPA Test Methods 3A, 6C, 7E, and 10 as the reference methods for measuring O₂, CO₂, SO₂, NO_x, and CO. These methods are instrumental procedures. A sample is continuously extracted from the effluent stack gas stream. A portion of the sample stream is conveyed to each analyzer for the determination of O₂, CO₂, SO₂, NO_x, and CO.

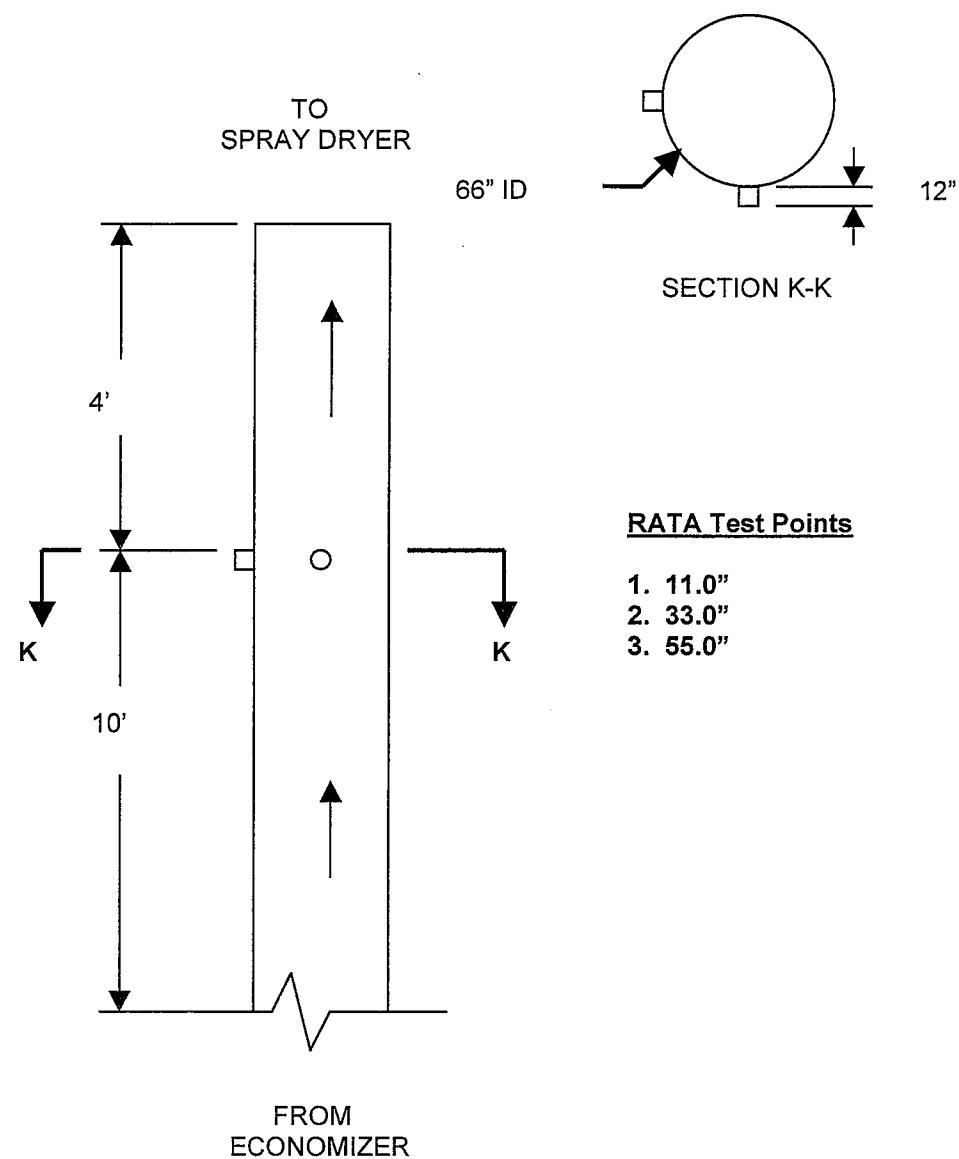
For each EPA Reference Method determination, the flue gas was sampled at three traverse points. The difference between the reference method sample and the monitor's reading was evaluated from a minimum of nine test runs.

4.3 Moisture and Molecular Weight Determinations

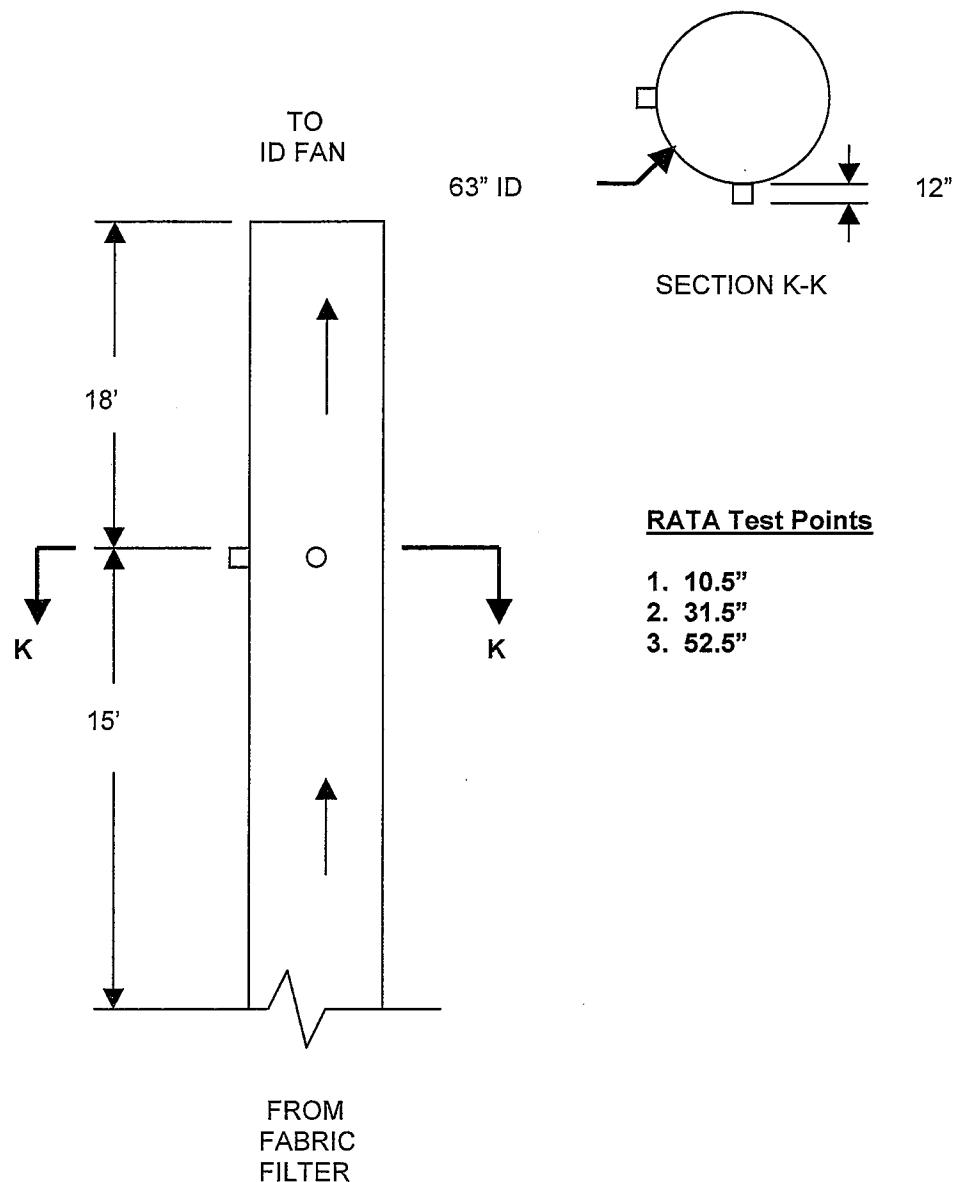
EPA Method 3A was used to determine the flue gas molecular weight (including oxygen and carbon dioxide). EPA Method 4 was used to determine the flue gas moisture content. Data from EPA Methods 3A and 4 were used to calculate the volumetric flow rate of the stack gas. The volumetric flow rate was then used to calculate lbs NO_x/hr.

4.4 Flow Rate Measurements

Moisture and volumetric flow rate data were taken from sampling trains running simultaneously with each RATA test including EPA Methods 2, 3A, and 4. The sampling trains consisted of a glass nozzle, a heated glass probe, a heated filter, four to six chilled impingers, and a dry gas metering console. At the end of each test run, the moisture was measured and a volumetric flow rate was calculated.



**Figure 4-2. SDA Inlet Sampling Location
(Units 1, 2, & 3 are identical)**



**Figure 4-3. Fabric Filter Outlet Sampling Location
(Units 1, 2, & 3 are identical)**

5 QA/QC RESULTS

5.1 QA/QC Policy Procedures

The calibration and quality assurance procedures of EPA Methods 3A, 6C, 7E, and 10 were followed throughout the test program and are summarized in Table 5-1. The results of sampling system bias and calibration drift tests for each test run are calculated and presented in Appendix B. The cylinder gas manufacturer's analyses of the O₂, CO₂, SO₂, NO_x, and CO calibration gases were conducted according to EPA Protocol 1 requirements. The certificates of analysis are included in the test report. A summary of the calibration gases used during the test program is presented in Table 5-2.

**Table 5-1
Summary of QA/QC Procedures**

Test Method	QA/QC Procedure	QA/QC Objective	QA/QC Results	Status of QA/QC
EPA M3A, 6C, 7E and 10	Initial Calibration Error Test	< ±2%	< ±2%	Acceptable
	System Bias Test	< ±5%	< ±5%	Acceptable
	Drift Test	< ±3%	< ±3%	Acceptable
	Leak Check	<2% of average flow	0.0%	Acceptable
	Response Time	NA	73 seconds	Acceptable
	Outlet Post-test	>90% Conversion Eff Checks	99.1%	Acceptable

**Table 5-2
Reference Method Calibration Gas Values**

Parameter	Span Level	Calibration Gas Value	Calibration Gas Serial Number
Oxygen	Mid	9.994%	CC92828
	Mid	9.988%	CC332317
	High	20.9%	CC252375
Carbon Dioxide	Mid	8.96%	CC92828
	Mid	9.031%	CC332317
	High	18.05%	CC252375
Sulfur Dioxide Outlet	Mid	48.66ppm	CC321220
	High	91.63ppm	CC61542
Sulfur Dioxide Inlet	Mid	242.2ppm	SG9154119BAL
	High	490.7ppm	XC022664B
Nitrogen Dioxide	Converter Gas	51.8ppm	FF10803
Nitrogen Oxides	Mid	236.6ppm	CC331862
	High	482.4ppm	FF747
Carbon Monoxide	Mid	45.07ppm	SG9113307BAL
	High	89.72ppm	FF7925

APPENDIX A
Relative Accuracy Results

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Oxygen

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 1 SDA Inlet		
Analyzer:	Servomex 1420		
Serial Number:	335		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/3/10	845	909	10.950	10.4	valid	0.550	0.302
2	8/3/10	924	948	10.383	9.8	valid	0.583	0.340
3	8/3/10	1010	1034	10.218	9.7	valid	0.518	0.268
4	8/3/10	1047	1111	10.658	10.2	valid	0.458	0.210
5	8/3/10	1123	1147	10.479	9.9	valid	0.579	0.335
6	8/3/10	1202	1226	10.377	10.0	valid	0.377	0.142
7	8/3/10	1238	1302	10.344	9.7	valid	0.644	0.415
8	8/3/10	1316	1340	10.405	9.7	void		
9	8/3/10	1351	1415	10.415	9.8	valid	0.615	0.378
10	8/3/10	1428	1452	10.239	9.7	valid	0.539	0.291
11						invalid		
Averages:				10.451	9.911		0.540	

Standard Deviation	0.0819
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0630

Absolute Difference = 0.5

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Carbon Dioxide

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 1 SDA Inlet		
Analyzer:	Siemens Ultramat 21P		
Serial Number:	A08-362		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Date	Test Start Time	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/3/10	845	909	8.748	9.1	valid	-0.352	0.124	
2	8/3/10	924	948	9.293	9.6	valid	-0.307	0.094	
3	8/3/10	1010	1034	9.354	9.8	valid	-0.446	0.199	
4	8/3/10	1047	1111	8.932	9.4	valid	-0.468	0.219	
5	8/3/10	1123	1147	9.171	9.6	valid	-0.429	0.184	
6	8/3/10	1202	1226	9.265	9.7	valid	-0.435	0.189	
7	8/3/10	1238	1302	9.191	9.7	valid	-0.509	0.259	
8	8/3/10	1316	1340	9.239	9.8	void			
9	8/3/10	1351	1415	9.183	9.6	valid	-0.417	0.174	
10	8/3/10	1428	1452	9.300	9.8	valid	-0.500	0.250	
11						invalid			
			Averages:	9.160	9.589		-0.429		

Standard Deviation	0.0654
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0503

Absolute Difference = 0.4

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 2
Sulfur Dioxide

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 1 SDA Inlet		
Analyzer:	Western Research 921		
Serial Number:	AX-921-9646-2		
App. Standard:	NA		
Parameter Units:	ppm@7%O ₂		

Test Run	Test #	Test Date	Test Start Time	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/3/10	845	909	59.442	59	valid	0.442	0.195	
2	8/3/10	924	948	75.335	76	valid	-0.665	0.442	
3	8/3/10	1010	1034	98.258	99	valid	-0.742	0.551	
4	8/3/10	1047	1111	66.501	67	valid	-0.499	0.249	
5	8/3/10	1123	1147	155.766	149	valid	6.766	45.785	
6	8/3/10	1202	1226	63.681	64	valid	-0.319	0.102	
7	8/3/10	1238	1302	83.642	85	void			
8	8/3/10	1316	1340	142.801	141	valid	1.801	3.244	
9	8/3/10	1351	1415	75.008	78	valid	-2.992	8.950	
10	8/3/10	1428	1452	56.390	60	valid	-3.610	13.031	
11						invalid			
Averages:				88.131	88.111		0.020		

Standard Deviation	3.0113
Number of Tests	9
t-value	2.306
Confidence Coefficient	2.3147

Relative Accuracy % of Reference Method: 2.6

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 1 SDA Inlet		

Run Number		1	2	3	4
Run Date		8/3/10	8/3/10	8/3/10	8/3/10
Run Start Time	hh:mm	845	924	1010	1047
Run Stop Time	hh:mm	909	948	1034	1111
Carbon Dioxide Percentage	% CO ₂	8.748	9.293	9.354	8.932
Oxygen Percentage	% O ₂	10.950	10.383	10.218	10.658

Sulfur Dioxide					
Formula Weight	Fwt	64.06	64.06	64.06	64.06
Concentration, ppm (dry)	ppmvd	42.550	57.000	75.510	49.000
Concentration, ppm@7%O₂	ppm@7%O ₂	59.442	75.335	98.258	66.501

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 1 SDA Inlet		

Run Number		5	6	7	8
Run Date		8/3/10	8/3/10	8/3/10	8/3/10
Run Start Time	hh:mm	1123	1202	1238	1316
Run Stop Time	hh:mm	1147	1226	1302	1340
Carbon Dioxide Percentage	% CO ₂	9.171	9.265	9.191	9.239
Oxygen Percentage	% O ₂	10.479	10.377	10.344	10.405

Sulfur Dioxide					
Formula Weight	Fwt	64.06	64.06	64.06	64.06
Concentration, ppm (dry)	ppmvd	116.780	48.210	63.520	107.820
Concentration, ppm@7%O₂	ppm@7%O ₂	155.766	63.681	83.642	142.801

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 1 SDA Inlet		

Run Number		9	10		
Run Date		8/3/10	8/3/10		
Run Start Time	hh:mm	1351	1428		
Run Stop Time	hh:mm	1415	1452		
Carbon Dioxide Percentage	% CO ₂	9.183	9.300		
Oxygen Percentage	% O ₂	10.415	10.239		

Sulfur Dioxide					
Formula Weight	Fwt	64.06	64.06		
Concentration, ppm (dry)	ppmvd	56.580	43.250		
Concentration, ppm@7%O₂	ppm@7%O ₂	75.008	56.390		

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Oxygen

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 1 FF Outlet		
Analyzer:	Servomex 1440		
Serial Number:	WO4036 O2		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Date	Test Start Time	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/3/10	845	909	11.495	11.4	valid	0.095	0.009	
2	8/3/10	924	948	10.950	11.0	valid	-0.050	0.003	
3	8/3/10	1010	1034	10.821	10.8	valid	0.021	0.000	
4	8/3/10	1047	1111	11.211	11.3	valid	-0.089	0.008	
5	8/3/10	1123	1147	11.006	11.0	valid	0.006	0.000	
6	8/3/10	1202	1226	10.906	10.8	void			
7	8/3/10	1238	1302	10.902	10.8	valid	0.102	0.010	
8	8/3/10	1316	1340	10.893	10.8	valid	0.093	0.009	
9	8/3/10	1351	1415	10.924	10.9	valid	0.024	0.001	
10	8/3/10	1428	1452	10.742	10.7	valid	0.042	0.002	
11						invalid			
Averages:				10.994	10.967		0.027		

Standard Deviation	0.0659
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0506

Absolute Difference = 0.0

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Carbon Dioxide

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 1 FF Outlet		
Analyzer:	Siemens Ultramat 21P		
Serial Number:	A08-361		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/3/10	845	909	8.128	8.0	valid	0.128	0.016
2	8/3/10	924	948	8.603	8.4	valid	0.203	0.041
3	8/3/10	1010	1034	8.761	8.6	valid	0.161	0.026
4	8/3/10	1047	1111	8.407	8.2	void		
5	8/3/10	1123	1147	8.606	8.4	valid	0.206	0.042
6	8/3/10	1202	1226	8.672	8.5	valid	0.172	0.030
7	8/3/10	1238	1302	8.660	8.5	valid	0.160	0.026
8	8/3/10	1316	1340	8.758	8.6	valid	0.158	0.025
9	8/3/10	1351	1415	8.690	8.5	valid	0.190	0.036
10	8/3/10	1428	1452	8.790	8.6	valid	0.190	0.036
11						invalid		
				Averages:	8.630	8.456		0.174

Standard Deviation	0.0253
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0194

Absolute Difference = 0.2

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 2
Sulfur Dioxide

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 1 FF Outlet		
Analyzer:	Western Research 921		
Serial Number:	AX-921-9646-1		
App. Standard:	29		
Parameter Units:	ppm@7%O ₂		

Test Run	Test #	Test Date	Test Start Time	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/3/10	845		909	0.000	0	valid	0.000	0.000
2	8/3/10	924		948	0.000	0	valid	0.000	0.000
3	8/3/10	1010		1034	0.000	0	valid	0.000	0.000
4	8/3/10	1047		1111	0.000	0	valid	0.000	0.000
5	8/3/10	1123		1147	2.829	1	void		
6	8/3/10	1202		1226	0.000	0	valid	0.000	0.000
7	8/3/10	1238		1302	0.000	0	valid	0.000	0.000
8	8/3/10	1316		1340	1.860	1	valid	0.860	0.739
9	8/3/10	1351		1415	0.000	0	valid	0.000	0.000
10	8/3/10	1428		1452	0.000	0	valid	0.000	0.000
11							invalid		
Averages:				0.207	0.111			0.096	

Standard Deviation	0.2866
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.2203

Relative Accuracy Percent of Standard: 1.1

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 2
Nitrogen Oxides

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 1 FF Outlet		
Analyzer:	Thermo Environmental 10S		
Serial Number:	WO4036 NOx		
App. Standard:	185		
Parameter Units:	ppm@7%O ₂		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/3/10	845	909	120.747	122	valid	-1.253	1.569
2	8/3/10	924	948	111.032	111	valid	0.032	0.001
3	8/3/10	1010	1034	118.010	120	valid	-1.990	3.960
4	8/3/10	1047	1111	118.901	120	valid	-1.099	1.208
5	8/3/10	1123	1147	109.652	112	valid	-2.348	5.514
6	8/3/10	1202	1226	119.292	121	valid	-1.708	2.918
7	8/3/10	1238	1302	128.587	132	void		
8	8/3/10	1316	1340	110.205	113	valid	-2.795	7.809
9	8/3/10	1351	1415	118.267	120	valid	-1.733	3.003
10	8/3/10	1428	1452	122.087	122	valid	0.087	0.008
11						invalid		
Averages:							-1.423	

Standard Deviation	0.9854
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.7574

Relative Accuracy % of Reference Method: 1.9

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 2
Nitrogen Oxides

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 1 FF Outlet		
Analyzer:	Thermo Environmental 10S		
Serial Number:	WO4036 NOx		
App. Standard:	N/A		
Parameter Units:	lb/hr		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/3/10	845	909	28.712	29.65	valid	-0.938	0.881
2	8/3/10	924	948	27.931	28.99	valid	-1.059	1.121
3	8/3/10	1010	1034	30.072	29.94	valid	0.132	0.017
4	8/3/10	1047	1111	29.126	29.29	valid	-0.164	0.027
5	8/3/10	1123	1147	27.429	28.54	valid	-1.111	1.235
6	8/3/10	1202	1226	30.142	31.06	valid	-0.918	0.843
7	8/3/10	1238	1302	32.503	34.18	void		
8	8/3/10	1316	1340	27.306	28.08	valid	-0.774	0.599
9	8/3/10	1351	1415	29.213	30.35	valid	-1.137	1.293
10	8/3/10	1428	1452	30.707	31.34	valid	-0.633	0.401
11						invalid		
Averages:				28.960	29.693		-0.734	

Standard Deviation	0.4433
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.3407

Relative Accuracy % of Reference Method: 3.7

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 4
Carbon Monoxide Low

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 1 FF Outlet		
Analyzer:	Thermo Environmental 48		
Serial Number:	0636119863L		
App. Standard:	100		
Parameter Units:	ppm@7%O ₂	Low Range	

Test Run	Test #	Test Date	Test Start Time	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/3/10	845	909	23.886	21	valid	2.886	8.331	
2	8/3/10	924	948	14.107	16	void			
3	8/3/10	1010	1034	13.442	15	valid	-1.558	2.427	
4	8/3/10	1047	1111	20.280	21	valid	-0.720	0.519	
5	8/3/10	1123	1147	16.665	16	valid	0.665	0.442	
6	8/3/10	1202	1226	14.207	14	valid	0.207	0.043	
7	8/3/10	1238	1302	12.697	13	valid	-0.303	0.092	
8	8/3/10	1316	1340	16.328	17	valid	-0.672	0.452	
9	8/3/10	1351	1415	16.121	17	valid	-0.879	0.773	
10	8/3/10	1428	1452	14.735	16	valid	-1.265	1.601	
11						invalid			
			Averages:	16.485	16.667		-0.182		

Standard Deviation	1.3407
Number of Tests	9
t-value	2.306
Confidence Coefficient	1.0306

Relative Accuracy % of Reference Method: 7.4

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 4
Carbon Monoxide High Range

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 1 FF Outlet		
Analyzer:	Thermo Environmental 48		
Serial Number:	0636119863H		
App. Standard:	100		
Parameter Units:	ppm@7%O ₂	High Range	

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/3/10	845	909	23.886	21	valid	2.886	8.331
2	8/3/10	924	948	14.107	16	void		
3	8/3/10	1010	1034	13.442	15	valid	-1.558	2.427
4	8/3/10	1047	1111	20.280	21	valid	-0.720	0.519
5	8/3/10	1123	1147	16.665	16	valid	0.665	0.442
6	8/3/10	1202	1226	14.207	14	valid	0.207	0.043
7	8/3/10	1238	1302	12.697	13	valid	-0.303	0.092
8	8/3/10	1316	1340	16.328	17	valid	-0.672	0.452
9	8/3/10	1351	1415	16.121	17	valid	-0.879	0.773
10	8/3/10	1428	1452	14.735	16	valid	-1.265	1.601
11						invalid		
Averages:		16.485	16.667			-0.182		

Standard Deviation	1.3407
Number of Tests	9
t-value	2.306
Confidence Coefficient	1.0306

Relative Accuracy % of Reference Method: 7.4

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 1 FF Outlet		

Run Number		1	2	3	4
Run Date		8/3/10	8/3/10	8/3/10	8/3/10
Run Start Time	hh:mm	845	924	1010	1047
Run Stop Time	hh:mm	909	948	1034	1111
Carbon Dioxide Percentage	% CO ₂	8.128	8.603	8.761	8.407
Oxygen Percentage	% O ₂	11.495	10.950	10.821	11.211
Dry Standard Stack Flow Rate	DSCFM	49,049	49,049	49,049	49,049

Flow rates taken from runs: 1-O-M4-1 1-O-M4-1 1-O-M4-1 1-O-M4-1

Sulfur Dioxide					
Formula Weight	Fwt	64.06	64.06	64.06	64.06
Concentration, ppm (dry)	ppmvd	-0.145	-0.377	-0.416	-0.315
Concentration, ppm@7%O₂	ppm@7%O ₂	-0.214	-0.527	-0.574	-0.452

Nitrogen Oxides as NO ₂					
Formula Weight	Fwt	46.01	46.01	46.01	46.01
Concentration, ppm (dry)	ppmvd	81.700	79.480	85.570	82.880
Concentration, ppm@7%O₂	ppm@7%O ₂	120.747	111.032	118.010	118.901
Emission Rate, lb/hr	lb/hr	28.712	27.931	30.072	29.126

Carbon Monoxide					
Formula Weight	Fwt	28.01	28.01	28.01	28.01
Concentration, ppm (dry)	ppmvd	16.162	10.098	9.747	14.136
Concentration, ppm@7%O₂	ppm@7%O ₂	23.886	14.107	13.442	20.280

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 1 FF Outlet		

Run Number		5	6	7	8
Run Date		8/3/10	8/3/10	8/3/10	8/3/10
Run Start Time	hh:mm	1123	1202	1238	1316
Run Stop Time	hh:mm	1147	1226	1302	1340
Carbon Dioxide Percentage	% CO ₂	8.606	8.672	8.660	8.758
Oxygen Percentage	% O ₂	11.006	10.906	10.902	10.893
Dry Standard Stack Flow Rate	DSCFM	49,049	49,049	49,049	48,036

Flow rates taken from runs: 1-O-M4-1 1-O-M4-1 1-O-M4-1 1-O-M4-2

Sulfur Dioxide					
Formula Weight	Fwt	64.06	64.06	64.06	64.06
Concentration, ppm (dry)	ppmvd	2.014	-0.488	-0.364	1.339
Concentration, ppm@7%O₂	ppm@7%O ₂	2.829	-0.679	-0.506	1.860

Nitrogen Oxides as NO₂					
Formula Weight	Fwt	46.01	46.01	46.01	46.01
Concentration, ppm (dry)	ppmvd	78.050	85.770	92.490	79.340
Concentration, ppm@7%O₂	ppm@7%O ₂	109.652	119.292	128.587	110.205
Emission Rate, lb/hr	lb/hr	27.429	30.142	32.503	27.306

Carbon Monoxide					
Formula Weight	Fwt	28.01	28.01	28.01	28.01
Concentration, ppm (dry)	ppmvd	11.862	10.215	9.133	11.755
Concentration, ppm@7%O₂	ppm@7%O ₂	16.665	14.207	12.697	16.328

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 1 FF Outlet		

Run Number		9	10	
Run Date		8/3/10	8/3/10	
Run Start Time	hh:mm	1351	1428	
Run Stop Time	hh:mm	1415	1452	
Carbon Dioxide Percentage	% CO ₂	8.690	8.790	
Oxygen Percentage	% O ₂	10.924	10.742	
Dry Standard Stack Flow Rate	DSCFM	48,036	48,036	

Flow rates taken from runs:

1-O-M4-4 1-O-M4-4

Sulfur Dioxide				
Formula Weight	Fwt	64.06	64.06	
Concentration, ppm (dry)	ppmvd	-0.338	-0.597	
Concentration, ppm@7%O₂	ppm@7%O ₂	-0.471	-0.817	

Nitrogen Oxides as NO₂				
Formula Weight	Fwt	46.01	46.01	
Concentration, ppm (dry)	ppmvd	84.880	89.220	
Concentration, ppm@7%O₂	ppm@7%O ₂	118.267	122.087	
Emission Rate, lb/hr	lb/hr	29.213	30.707	

Carbon Monoxide				
Formula Weight	Fwt	28.01	28.01	
Concentration, ppm (dry)	ppmvd	11.570	10.768	
Concentration, ppm@7%O₂	ppm@7%O ₂	16.121	14.735	

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Oxygen

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 2 SDA Inlet		
Analyzer:	Servomex 1420		
Serial Number:	3337		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/4/10	834	858	10.481	9.9	valid	0.581	0.338
2	8/4/10	912	936	10.607	10.0	valid	0.607	0.368
3	8/4/10	951	1015	10.206	9.7	valid	0.506	0.256
4	8/4/10	1029	1053	10.194	9.9	valid	0.294	0.086
5	8/4/10	1110	1134	10.345	9.9	valid	0.445	0.198
6	8/4/10	1151	1215	10.504	9.9	valid	0.604	0.365
7	8/4/10	1227	1251	10.475	9.9	valid	0.575	0.331
8	8/4/10	1312	1336	10.505	9.9	valid	0.605	0.366
9	8/4/10	1349	1413	10.196	9.6	void		
10	8/4/10	1426	1450	10.296	9.7	valid	0.596	0.355
Averages:			10.401	9.867			0.535	

Standard Deviation	0.1057
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0812

Absolute Difference = 0.5

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Carbon Dioxide

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 2 SDA Inlet		
Analyzer:	Siemens Ultramat 21P		
Serial Number:	A08-369		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/4/10	834	858	9.246	9.2	valid	0.046	0.002
2	8/4/10	912	936	9.116	9.0	valid	0.116	0.013
3	8/4/10	951	1015	9.019	9.2	valid	-0.181	0.033
4	8/4/10	1029	1053	8.740	9.3	void		
5	8/4/10	1110	1134	9.106	9.1	valid	0.006	0.000
6	8/4/10	1151	1215	8.999	9.1	valid	-0.101	0.010
7	8/4/10	1227	1251	9.095	9.1	valid	-0.005	0.000
8	8/4/10	1312	1336	9.116	9.1	valid	0.016	0.000
9	8/4/10	1349	1413	9.385	9.5	valid	-0.115	0.013
10	8/4/10	1426	1450	9.168	9.3	valid	-0.132	0.017
Averages:			9.139	9.178			-0.039	

Standard Deviation	0.0974
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0749

Absolute Difference = 0.0

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 2
Sulfur Dioxide

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 2 SDA Inlet		
Analyzer:	Western Research 921		
Serial Number:	AX-921-9646-4		
App. Standard:	NA		
Parameter Units:	ppm@7%O ₂		

Test Run	Test #	Test Date	Test Start Time	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/4/10	834		858	51.029	53	valid	-1.971	3.883
2	8/4/10		912		52.977	41	void		
3	8/4/10		951		65.198	59	valid	6.198	38.411
4	8/4/10		1029		56.348	58	valid	-1.652	2.730
5	8/4/10		1110		88.444	88	valid	0.444	0.197
6	8/4/10		1151		56.878	60	valid	-3.122	9.745
7	8/4/10		1227		64.627	64	valid	0.627	0.393
8	8/4/10		1312		56.590	53	valid	3.590	12.885
9	8/4/10		1349		62.631	61	valid	1.631	2.659
10	8/4/10		1426		41.383	41	valid	0.383	0.147
Averages:				60.347	59.667			0.681	

Standard Deviation	2.8913
Number of Tests	9
t-value	2.306
Confidence Coefficient	2.2225

Relative Accuracy % of Reference Method: 4.8

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 2 SDA Inlet		

Run Number		1	2	3	4
Run Date		8/4/10	8/4/10	8/4/10	8/4/10
Run Start Time	hh:mm	834	912	951	1029
Run Stop Time	hh:mm	858	936	1015	1053
Carbon Dioxide Percentage	% CO ₂	9.246	9.116	9.019	8.740
Oxygen Percentage	% O ₂	10.481	10.607	10.206	10.194

Sulfur Dioxide					
Formula Weight	Fwt	64.06	64.06	64.06	64.06
Concentration, ppm (dry)	ppmvd	38.250	39.230	50.160	43.400
Concentration, ppm@7%O ₂	ppm@7%O ₂	51.029	52.977	65.198	56.348

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 2 SDA Inlet		

Run Number		5	6	7	8
Run Date		8/4/10	8/4/10	8/4/10	8/4/10
Run Start Time	hh:mm	1110	1151	1227	1312
Run Stop Time	hh:mm	1134	1215	1251	1336
Carbon Dioxide Percentage	% CO ₂	9.106	8.999	9.095	9.116
Oxygen Percentage	% O ₂	10.345	10.504	10.475	10.505

Sulfur Dioxide

Formula Weight	Fwt	64.06	64.06	64.06	64.06
Concentration, ppm (dry)	ppmvd	67.160	42.540	48.470	42.320
Concentration, ppm@7%O₂	ppm@7%O ₂	88.444	56.878	64.627	56.590

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 2 SDA Inlet		

Run Number		9	10	
Run Date		8/4/10	8/4/10	
Run Start Time	hh:mm	1349	1426	
Run Stop Time	hh:mm	1413	1450	
Carbon Dioxide Percentage	% CO ₂	9.385	9.168	
Oxygen Percentage	% O ₂	10.196	10.296	

Sulfur Dioxide				
Formula Weight	Fwt	64.06	64.06	
Concentration, ppm (dry)	ppmvd	48.230	31.570	
Concentration, ppm@7%O₂	ppm@7%O ₂	62.631	41.383	

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Oxygen

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 2 FF Outlet		
Analyzer:	Servomex 1440		
Serial Number:	WO4037 O2		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/4/10	834	858	11.269	11.3	valid	-0.031	0.001
2	8/4/10	912	936	11.341	11.5	valid	-0.159	0.025
3	8/4/10	951	1015	11.327	11.2	valid	0.127	0.016
4	8/4/10	1029	1053	11.816	11.5	valid	0.316	0.100
5	8/4/10	1110	1134	11.416	11.3	valid	0.116	0.013
6	8/4/10	1151	1215	11.555	11.4	valid	0.155	0.024
7	8/4/10	1227	1251	11.527	11.4	valid	0.127	0.016
8	8/4/10	1312	1336	11.722	11.3	void		
9	8/4/10	1349	1413	11.263	11.1	valid	0.163	0.027
10	8/4/10	1426	1450	11.358	11.2	valid	0.158	0.025
Averages:			11.430	11.322			0.108	

Standard Deviation	0.1334
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.1026

Absolute Difference = 0.1

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Carbon Dioxide

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 2 FF Outlet		
Analyzer:	Siemens Ultramat 21P		
Serial Number:	A08-363		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Date	Test Start Time	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/4/10	834		858	8.287	8.0	valid	0.287	0.082
2	8/4/10		912	936	8.203	7.9	void		
3	8/4/10		951	1015	7.970	8.0	valid	-0.030	0.001
4	8/4/10		1029	1053	7.707	7.9	valid	-0.193	0.037
5	8/4/10		1110	1134	8.055	8.0	valid	0.055	0.003
6	8/4/10		1151	1215	7.844	7.9	valid	-0.056	0.003
7	8/4/10		1227	1251	7.898	7.9	valid	-0.002	0.000
8	8/4/10		1312	1336	7.814	7.9	valid	-0.086	0.007
9	8/4/10		1349	1413	8.233	8.2	valid	0.033	0.001
10	8/4/10		1426	1450	8.085	8.1	valid	-0.015	0.000
Averages:				7.988	7.989			-0.001	

Standard Deviation	0.1301
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.1000

Absolute Difference = 0.0

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 2
Sulfur Dioxide

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 2 FF Outlet		
Analyzer:	Western Research 921		
Serial Number:	AX-921-9646-3		
App. Standard:	29		
Parameter Units:	ppm@7%O ₂		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/4/10	834	858	0.000	0	valid	0.000	0.000
2	8/4/10	912	936	0.000	0	valid	0.000	0.000
3	8/4/10	951	1015	0.000	0	valid	0.000	0.000
4	8/4/10	1029	1053	0.000	0	valid	0.000	0.000
5	8/4/10	1110	1134	0.000	0	valid	0.000	0.000
6	8/4/10	1151	1215	0.000	0	valid	0.000	0.000
7	8/4/10	1227	1251	0.000	0	valid	0.000	0.000
8	8/4/10	1312	1336	0.000	0	valid	0.000	0.000
9	8/4/10	1349	1413	0.000	0	valid	0.000	0.000
10	8/4/10	1426	1450	0.000	0	void		
Averages:			0.000	0.000	0.000			

Standard Deviation	0.0000
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0000

Relative Accuracy Percent of Standard: 0.0

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 2
Nitrogen Oxides

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 2 FF Outlet		
Analyzer:	Thermo Environmental 10S		
Serial Number:	WO4037 NOx		
App. Standard:	185		
Parameter Units:	ppm@7%O ₂		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/4/10	834	858	110.236	113	valid	-2.764	7.640
2	8/4/10	912	936	110.063	112	valid	-1.937	3.752
3	8/4/10	951	1015	120.850	119	valid	1.850	3.422
4	8/4/10	1029	1053	112.436	112	valid	0.436	0.190
5	8/4/10	1110	1134	112.824	110	valid	2.824	7.974
6	8/4/10	1151	1215	124.260	124	valid	0.260	0.067
7	8/4/10	1227	1251	108.851	108	valid	0.851	0.724
8	8/4/10	1312	1336	127.157	124	void		
9	8/4/10	1349	1413	119.254	117	valid	2.254	5.081
10	8/4/10	1426	1450	121.374	119	valid	2.374	5.635
Averages:			115.572	114.889			0.683	

Standard Deviation	1.9458
Number of Tests	9
t-value	2.306
Confidence Coefficient	1.4956

Relative Accuracy % of Reference Method: 1.9

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 2
Nitrogen Oxides

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 2 FF Outlet		
Analyzer:	Thermo Environmental 10S		
Serial Number:	WO4037 NOx		
App. Standard:	N/A		
Parameter Units:	lb/hr		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/4/10	834	858	29.537	29.38	valid	0.157	0.025
2	8/4/10	912	936	29.270	29.01	valid	0.260	0.067
3	8/4/10	951	1015	32.186	31.82	valid	0.366	0.134
4	8/4/10	1029	1053	28.415	28.94	valid	-0.525	0.275
5	8/4/10	1110	1134	29.769	28.82	valid	0.949	0.900
6	8/4/10	1151	1215	32.305	30.40	valid	1.905	3.631
7	8/4/10	1227	1251	28.384	28.14	valid	0.244	0.060
8	8/4/10	1312	1336	33.070	32.06	valid	1.010	1.020
9	8/4/10	1349	1413	32.566	30.19	void		
10	8/4/10	1426	1450	32.818	31.33	valid	1.488	2.214
Averages:			30.639	29.989			0.650	

Standard Deviation	0.7515
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.5777

Relative Accuracy % of Reference Method: 4.0

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 4
Carbon Monoxide Low

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 2 FF Outlet		
Analyzer:	Thermo Environmental 48		
Serial Number:	0636119864L		
App. Standard:	100		
Parameter Units:	ppm@7%O ₂	Low Range	

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/4/10	834	858	13.031	11	valid	2.031	4.126
2	8/4/10	912	936	18.997	15	valid	3.997	15.974
3	8/4/10	951	1015	20.107	15	void		
4	8/4/10	1029	1053	23.355	22	valid	1.355	1.836
5	8/4/10	1110	1134	5.033	8	valid	-2.967	8.803
6	8/4/10	1151	1215	25.840	21	valid	4.840	23.421
7	8/4/10	1227	1251	22.263	18	valid	4.263	18.169
8	8/4/10	1312	1336	18.454	15	valid	3.454	11.931
9	8/4/10	1349	1413	13.381	13	valid	0.381	0.145
10	8/4/10	1426	1450	14.844	14	valid	0.844	0.712
Averages:			17.244	15.222		2.022		

Standard Deviation	2.4578
Number of Tests	9
t-value	2.306
Confidence Coefficient	1.8892

Relative Accuracy Percent of Standard: 3.9

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 4
Carbon Monoxide High Range

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 2 FF Outlet		
Analyzer:	Thermo Environmental 48		
Serial Number:	0636119864H		
App. Standard:	100		
Parameter Units:	ppm@7%O ₂	High Range	

Test Run	Test #	Test Date	Test Start Time	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/4/10	834		858	13.031	11	valid	2.031	4.126
2	8/4/10		912	936	18.997	15	valid	3.997	15.974
3	8/4/10		951	1015	20.107	15	void		
4	8/4/10		1029	1053	23.355	22	valid	1.355	1.836
5	8/4/10		1110	1134	5.033	8	valid	-2.967	8.803
6	8/4/10		1151	1215	25.840	21	valid	4.840	23.421
7	8/4/10		1227	1251	22.263	18	valid	4.263	18.169
8	8/4/10		1312	1336	18.454	15	valid	3.454	11.931
9	8/4/10		1349	1413	13.381	13	valid	0.381	0.145
10	8/4/10		1426	1450	14.844	14	valid	0.844	0.712
Averages:				17.244	15.222			2.022	

Standard Deviation	2.4578
Number of Tests	9
t-value	2.306
Confidence Coefficient	1.8892

Relative Accuracy Percent of Standard: 3.9

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 2 FF Outlet		

Run Number		1	2	3	4
Run Date		8/4/10	8/4/10	8/4/10	8/4/10
Run Start Time	hh:mm	834	912	951	1029
Run Stop Time	hh:mm	858	936	1015	1053
Carbon Dioxide Percentage	% CO ₂	8.287	8.203	7.970	7.707
Oxygen Percentage	% O ₂	11.269	11.341	11.327	11.816
Dry Standard Stack Flow Rate	DSCFM	53,973	53,973	53,973	53,973

Flow rates taken from runs: 2-O-M4-1 2-O-M4-1 2-O-M4-1 2-O-M4-1

Sulfur Dioxide					
Formula Weight	Fwt	64.06	64.06	64.06	64.06
Concentration, ppm (dry)	ppmvd	-0.594	-0.599	-0.539	-0.467
Concentration, ppm@7%O₂	ppm@7%O ₂	-0.857	-0.871	-0.783	-0.715

Nitrogen Oxides as NO ₂					
Formula Weight	Fwt	46.01	46.01	46.01	46.01
Concentration, ppm (dry)	ppmvd	76.380	75.690	83.230	73.480
Concentration, ppm@7%O₂	ppm@7%O ₂	110.236	110.063	120.850	112.436
Emission Rate, lb/hr	lb/hr	29.537	29.270	32.186	28.415

Carbon Monoxide					
Formula Weight	Fwt	28.01	28.01	28.01	28.01
Concentration, ppm (dry)	ppmvd	9.029	13.064	13.848	15.263
Concentration, ppm@7%O₂	ppm@7%O ₂	13.031	18.997	20.107	23.355

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 2 FF Outlet		

Run Number		5	6	7	8
Run Date		8/4/10	8/4/10	8/4/10	8/4/10
Run Start Time	hh:mm	1110	1151	1227	1312
Run Stop Time	hh:mm	1134	1215	1251	1336
Carbon Dioxide Percentage	% CO ₂	8.055	7.844	7.898	7.814
Oxygen Percentage	% O ₂	11.416	11.555	11.527	11.722
Dry Standard Stack Flow Rate	DSCFM	53,973	53,973	53,973	54,974

Flow rates taken from runs: 2-O-M4-1 2-O-M4-1 2-O-M4-1 2-O-M4-2

Sulfur Dioxide					
Formula Weight	Fwt	64.06	64.06	64.06	64.06
Concentration, ppm (dry)	ppmvd	-0.595	-0.760	-0.598	-0.666
Concentration, ppm@7%O₂	ppm@7%O ₂	-0.872	-1.130	-0.887	-1.009

Nitrogen Oxides as NO ₂					
Formula Weight	Fwt	46.01	46.01	46.01	46.01
Concentration, ppm (dry)	ppmvd	76.980	83.540	73.400	83.960
Concentration, ppm@7%O₂	ppm@7%O ₂	112.824	124.260	108.851	127.157
Emission Rate, lb/hr	lb/hr	29.769	32.305	28.384	33.070

Carbon Monoxide					
Formula Weight	Fwt	28.01	28.01	28.01	28.01
Concentration, ppm (dry)	ppmvd	3.434	17.372	15.012	12.185
Concentration, ppm@7%O₂	ppm@7%O ₂	5.033	25.840	22.263	18.454

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 2 FF Outlet		

Run Number		9	10	
Run Date		8/4/10	8/4/10	
Run Start Time	hh:mm	1349	1426	
Run Stop Time	hh:mm	1413	1450	
Carbon Dioxide Percentage	% CO ₂	8.233	8.085	
Oxygen Percentage	% O ₂	11.263	11.358	
Dry Standard Stack Flow Rate	DSCFM	54,974	54,974	

Flow rates taken from runs: 2-O-M4-2 2-O-M4-2

Sulfur Dioxide	
Formula Weight	Fwt
	64.06
Concentration, ppm (dry)	ppmvd
	-0.583
Concentration, ppm@7%O₂	ppm@7%O ₂
	-0.841
	-1.254

Nitrogen Oxides as NO₂	
Formula Weight	Fwt
	46.01
Concentration, ppm (dry)	ppmvd
	82.680
Concentration, ppm@7%O₂	ppm@7%O ₂
	119.254
Emission Rate, lb/hr	lb/hr
	32.566
	32.818

Carbon Monoxide	
Formula Weight	Fwt
	28.01
Concentration, ppm (dry)	ppmvd
	9.277
Concentration, ppm@7%O₂	ppm@7%O ₂
	13.381
	14.844

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Oxygen

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 3 SDA Inlet		
Analyzer:	Servomex 1420		
Serial Number:	3343		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/6/10	729	753	10.665	10.1	valid	0.565	0.319
2	8/6/10	808	832	10.831	10.3	valid	0.531	0.282
3	8/6/10	843	907	10.907	10.4	valid	0.507	0.257
4	8/6/10	936	1000	11.062	10.5	valid	0.562	0.316
5	8/6/10	1012	1036	10.854	10.4	valid	0.454	0.206
6	8/6/10	1049	1113	10.912	10.4	valid	0.512	0.262
7	8/6/10	1124	1148	10.885	10.5	valid	0.385	0.148
8	8/6/10	1203	1227	10.784	10.2	valid	0.584	0.341
9	8/6/10	1240	1304	10.784	10.2	void		
10	8/6/10	1319	1343	10.860	10.4	valid	0.460	0.212
Averages:			10.862	10.356		0.507		

Standard Deviation	0.0641
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0492

Absolute Difference = 0.5

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Carbon Dioxide

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 3 SDA Inlet		
Analyzer:	Siemens Ultramat 21P		
Serial Number:	A08-367		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/6/10	729	753	8.970	9.2	valid	-0.230	0.053
2	8/6/10	808	832	8.759	9.0	valid	-0.241	0.058
3	8/6/10	843	907	8.694	8.9	valid	-0.206	0.042
4	8/6/10	936	1000	8.562	8.8	valid	-0.238	0.057
5	8/6/10	1012	1036	8.788	9.0	valid	-0.212	0.045
6	8/6/10	1049	1113	8.801	9.0	valid	-0.199	0.040
7	8/6/10	1124	1148	8.722	8.8	valid	-0.078	0.006
8	8/6/10	1203	1227	8.902	9.2	valid	-0.298	0.089
9	8/6/10	1240	1304	8.875	9.2	void		
10	8/6/10	1319	1343	8.845	9.0	valid	-0.155	0.024
Averages:			8.783	8.989			-0.206	

Standard Deviation	0.0616
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0474

Absolute Difference = 0.2

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 2
Sulfur Dioxide

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 3 SDA Inlet		
Analyzer:	Western Research 921		
Serial Number:	AX-921-9646-6		
App. Standard:	NA		
Parameter Units:	ppm@7%O ₂		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/6/10	729	753	106.094	106	valid	0.094	0.009
2	8/6/10	808	832	161.764	159	valid	2.764	7.640
3	8/6/10	843	907	295.985	284	valid	11.985	143.647
4	8/6/10	936	1000	78.444	82	valid	-3.556	12.648
5	8/6/10	1012	1036	126.547	126	valid	0.547	0.300
6	8/6/10	1049	1113	119.238	116	valid	3.238	10.486
7	8/6/10	1124	1148	107.605	110	valid	-2.395	5.735
8	8/6/10	1203	1227	103.783	120	void		
9	8/6/10	1240	1304	95.951	98	valid	-2.049	4.200
10	8/6/10	1319	1343	121.971	121	valid	0.971	0.943
Averages:			134.844	133.556		1.289		

Standard Deviation	4.6187
Number of Tests	9
t-value	2.306
Confidence Coefficient	3.5502

Relative Accuracy % of Reference Method: 3.6

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 3 SDA Inlet		

Run Number		1	2	3	4
Run Date		8/6/10	8/6/10	8/6/10	8/6/10
Run Start Time	hh:mm	729	808	843	936
Run Stop Time	hh:mm	753	832	907	1000
Carbon Dioxide Percentage	% CO ₂	8.970	8.759	8.694	8.562
Oxygen Percentage	% O ₂	10.665	10.831	10.907	11.062

Sulfur Dioxide					
Formula Weight	Fwt	64.06	64.06	64.06	64.06
Concentration, ppm (dry)	ppmvd	78.120	117.180	212.790	55.520
Concentration, ppm@7%O₂	ppm@7%O ₂	106.094	161.764	295.985	78.444

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH		
Plant Name	Huntington RRF	Project #	10731		
Sampling Location	Unit 3 SDA Inlet				
Run Number		5	6	7	8
Run Date		8/6/10	8/6/10	8/6/10	8/6/10
Run Start Time	hh:mm	1012	1049	1124	1203
Run Stop Time	hh:mm	1036	1113	1148	1227
Carbon Dioxide Percentage	% CO ₂	8.788	8.801	8.722	8.902
Oxygen Percentage	% O ₂	10.854	10.912	10.885	10.784

Sulfur Dioxide	Fwt	64.06	64.06	64.06	64.06
Formula Weight	Fwt	64.06	64.06	64.06	64.06
Concentration, ppm (dry)	ppmvd	91.460	85.680	77.530	75.530
Concentration, ppm@7%O₂	ppm@7%O ₂	126.547	119.238	107.605	103.783

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 3 SDA Inlet		
Run Number		9	10
Run Date		8/6/10	8/6/10
Run Start Time	hh:mm	1240	1319
Run Stop Time	hh:mm	1304	1343
Carbon Dioxide Percentage	% CO ₂	8.875	8.845
Oxygen Percentage	% O ₂	10.784	10.860

Sulfur Dioxide				
Formula Weight	Fwt	64.06	64.06	
Concentration, ppm (dry)	ppmvd	69.830	88.100	
Concentration, ppm@7%O₂	ppm@7%O ₂	95.951	121.971	

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Oxygen

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 3 FF Outlet		
Analyzer:	Servomex 1440		
Serial Number:	WO4038 O2		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Date	Test Start Time	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/6/10	729	753	11.274	11.2	valid	0.074	0.005	
2	8/6/10	808	832	11.435	11.4	valid	0.035	0.001	
3	8/6/10	843	907	11.538	11.5	valid	0.038	0.001	
4	8/6/10	936	1000	11.670	11.5	void			
5	8/6/10	1012	1036	11.442	11.4	valid	0.042	0.002	
6	8/6/10	1049	1113	11.518	11.4	valid	0.118	0.014	
7	8/6/10	1124	1148	11.499	11.5	valid	-0.001	0.000	
8	8/6/10	1203	1227	11.286	11.2	valid	0.086	0.007	
9	8/6/10	1240	1304	11.304	11.3	valid	0.004	0.000	
10	8/6/10	1319	1343	11.444	11.4	valid	0.044	0.002	
Averages:				11.416	11.367		0.049		

Standard Deviation	0.0382
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0294

Absolute Difference = 0.0

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Carbon Dioxide

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 3 FF Outlet		
Analyzer:	Siemens Ultramat 21P		
Serial Number:	A08-368		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/6/10	729	753	8.336	8.1	void		
2	8/6/10	808	832	8.112	8.0	valid	0.112	0.013
3	8/6/10	843	907	7.983	7.9	valid	0.083	0.007
4	8/6/10	936	1000	7.878	7.9	valid	-0.022	0.000
5	8/6/10	1012	1036	8.121	8.0	valid	0.121	0.015
6	8/6/10	1049	1113	8.105	8.1	valid	0.005	0.000
7	8/6/10	1124	1148	7.939	7.8	valid	0.139	0.019
8	8/6/10	1203	1227	8.231	8.2	valid	0.031	0.001
9	8/6/10	1240	1304	8.206	8.1	valid	0.106	0.011
10	8/6/10	1319	1343	8.121	8.0	valid	0.121	0.015
Averages:			8.077	8.000		0.077		

8.089

Standard Deviation	0.0580
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0446

Absolute Difference = 0.1

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 2
Sulfur Dioxide

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 3 FF Outlet		
Analyzer:	Western Research 921		
Serial Number:	AX-921-9646-5		
App. Standard:	29		
Parameter Units:	ppm@7%O ₂		

Test Run #	Test Date	Test Start Time	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/6/10	729	753	0.000	0	valid	0.000	0.000
2	8/6/10	808	832	0.576	0	valid	0.576	0.331
3	8/6/10	843	907	35.345	26	void		
4	8/6/10	936	1000	0.000	0	valid	0.000	0.000
5	8/6/10	1012	1036	0.000	0	valid	0.000	0.000
6	8/6/10	1049	1113	0.000	0	valid	0.000	0.000
7	8/6/10	1124	1148	2.880	0	valid	2.880	8.296
8	8/6/10	1203	1227	1.647	0	valid	1.647	2.712
9	8/6/10	1240	1304	0.000	0	valid	0.000	0.000
10	8/6/10	1319	1343	0.000	0	valid	0.000	0.000
Averages:		0.567	0.000			0.567		

Standard Deviation	1.0275
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.7898

Relative Accuracy Percent of Standard: 4.7

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 2
Nitrogen Oxides

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 3 FF Outlet		
Analyzer:	Thermo Environmental 10S		
Serial Number:	WO4038 NOx		
App. Standard:	185		
Parameter Units:	ppm@7%O ₂		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/6/10	729	753	119.347	116	valid	3.347	11.203
2	8/6/10	808	832	104.122	107	valid	-2.878	8.286
3	8/6/10	843	907	102.505	107	valid	-4.495	20.201
4	8/6/10	936	1000	116.004	117	valid	-0.996	0.992
5	8/6/10	1012	1036	114.560	114	valid	0.560	0.313
6	8/6/10	1049	1113	109.458	112	valid	-2.542	6.463
7	8/6/10	1124	1148	112.815	119	void		
8	8/6/10	1203	1227	111.038	115	valid	-3.962	15.697
9	8/6/10	1240	1304	110.001	113	valid	-2.999	8.996
10	8/6/10	1319	1343	115.187	113	valid	2.187	4.781
Averages:					111.358	112.667	-1.309	

Standard Deviation	2.7730
Number of Tests	9
t-value	2.306
Confidence Coefficient	2.1315

Relative Accuracy % of Reference Method: 3.1

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 2
Nitrogen Oxides

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 3 FF Outlet		
Analyzer:	Thermo Environmental 10S		
Serial Number:	WO4038 NOx		
App. Standard:	N/A		
Parameter Units:	Ib/hr NOx		

Test Run	Test #	Test Start Date	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/6/10	729	753	33.231	29.84	void		
2	8/6/10	808	832	28.507	27.39	valid	1.117	1.247
3	8/6/10	843	907	27.759	27.31	valid	0.449	0.201
4	8/6/10	936	1000	30.971	29.81	valid	1.161	1.349
5	8/6/10	1012	1036	31.341	29.03	valid	2.311	5.341
6	8/6/10	1049	1113	29.705	28.18	valid	1.525	2.325
7	8/6/10	1124	1148	30.466	30.36	valid	0.106	0.011
8	8/6/10	1203	1227	30.666	29.35	valid	1.316	1.731
9	8/6/10	1240	1304	30.322	29.14	valid	1.182	1.398
10	8/6/10	1319	1343	31.289	28.11	valid	3.179	10.104
Averages:			30.114	28.742		1.372		

Standard Deviation	0.9201
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.7073

Relative Accuracy % of Reference Method: 6.9

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 4
Carbon Monoxide Low

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 3 FF Outlet		
Analyzer:	Thermo Environmental 48		
Serial Number:	0636119865L		
App. Standard:	100		
Parameter Units:	ppm@7%O ₂	Low Range	

Test Run #	Test Date	Test Start Time	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/6/10	729	753	30.971	28	void		
2	8/6/10	808	832	43.502	41	valid	2.502	6.260
3	8/6/10	843	907	25.413	24	valid	1.413	1.995
4	8/6/10	936	1000	24.409	23	valid	1.409	1.984
5	8/6/10	1012	1036	21.138	22	valid	-0.862	0.743
6	8/6/10	1049	1113	20.659	21	valid	-0.341	0.116
7	8/6/10	1124	1148	9.423	12	valid	-2.577	6.641
8	8/6/10	1203	1227	18.200	17	valid	1.200	1.440
9	8/6/10	1240	1304	20.563	19	valid	1.563	2.444
10	8/6/10	1319	1343	18.286	17	valid	1.286	1.655
Averages:			22.399	21.778		0.621		

Standard Deviation	1.5733
Number of Tests	9
t-value	2.306
Confidence Coefficient	1.2094

Relative Accuracy % of Reference Method: 8.2

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 4
Carbon Monoxide High Range

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 3 FF Outlet		
Analyzer:	Thermo Environmental 48		
Serial Number:	0636119865H		
App. Standard:	100		
Parameter Units:	ppm@7%O ₂	High Range	

Test Run #	Test Date	Test Start Time	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/6/10	729	753	30.971	28	void		
2	8/6/10	808	832	43.502	41	valid	2.502	6.260
3	8/6/10	843	907	25.413	24	valid	1.413	1.995
4	8/6/10	936	1000	24.409	23	valid	1.409	1.984
5	8/6/10	1012	1036	21.138	22	valid	-0.862	0.743
6	8/6/10	1049	1113	20.659	21	valid	-0.341	0.116
7	8/6/10	1124	1148	9.423	12	valid	-2.577	6.641
8	8/6/10	1203	1227	18.200	17	valid	1.200	1.440
9	8/6/10	1240	1304	20.563	19	valid	1.563	2.444
10	8/6/10	1319	1343	18.286	17	valid	1.286	1.655
Averages:			22.399	21.778		0.621		

Standard Deviation	1.5733
Number of Tests	9
t-value	2.306
Confidence Coefficient	1.2094

Relative Accuracy % of Reference Method: 8.2

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 3 FF Outlet		

Run Number		1	2	3	4
Run Date		8/6/10	8/6/10	8/6/10	8/6/10
Run Start Time	hh:mm	729	808	843	936
Run Stop Time	hh:mm	753	832	907	1000
Carbon Dioxide Percentage	% CO ₂	8.336	8.112	7.983	7.878
Oxygen Percentage	% O ₂	11.274	11.435	11.538	11.670
Dry Standard Stack Flow Rate	DSCFM	56,117	56,117	56,117	56,117

Flow Rates taken from runs: 3-O-M4-1 3-O-M4-1 3-O-M4-1 3-O-M4-1

Sulfur Dioxide					
Formula Weight	Fwt	64.06	64.06	64.06	64.06
Concentration, ppm (dry)	ppmvd	0.222	0.392	23.806	-0.939
Concentration, ppm@7%O₂	ppm@7%O ₂	-0.321	0.576	35.345	-1.414

Nitrogen Oxides as NO₂					
Formula Weight	Fwt	46.01	46.01	46.01	46.01
Concentration, ppm (dry)	ppmvd	82.650	70.900	69.040	77.030
Concentration, ppm@7%O₂	ppm@7%O ₂	119.347	104.122	102.505	116.004
Emission Rate, lb/hr	lb/hr	33.231	28.507	27.759	30.971

Carbon Monoxide					
Formula Weight	Fwt	28.01	28.01	28.01	28.01
Concentration, ppm (dry)	ppmvd	21.448	29.622	17.116	16.208
Concentration, ppm@7%O₂	ppm@7%O ₂	30.971	43.502	25.413	24.409

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 3 FF Outlet		

Run Number		5	6	7	8
Run Date		8/6/10	8/6/10	8/6/10	8/6/10
Run Start Time	hh:mm	1012	1049	1124	1203
Run Stop Time	hh:mm	1036	1113	1148	1227
Carbon Dioxide Percentage	% CO ₂	8.121	8.105	7.939	8.231
Oxygen Percentage	% O ₂	11.442	11.518	11.499	11.286
Dry Standard Stack Flow Rate	DSCFM	56.117	56.117	55.730	55.730

Flow Rates taken from runs: 3-O-M4-1 3-O-M4-1 3-O-M4-2 3-O-M4-2

Sulfur Dioxide					
Formula Weight	Fwt	64.06	64.06	64.06	64.06
Concentration, ppm (dry)	ppmvd	-0.318	-0.282	1.948	1.139
Concentration, ppm@7%O₂	ppm@7%O ₂	-0.467	-0.418	2.880	1.647

Nitrogen Oxides as NO ₂					
Formula Weight	Fwt	46.01	46.01	46.01	46.01
Concentration, ppm (dry)	ppmvd	77.950	73.880	76.300	76.800
Concentration, ppm@7%O₂	ppm@7%O ₂	114.560	109.458	112.815	111.038
Emission Rate, lb/hr	lb/hr	31.341	29.705	30.466	30.666

Carbon Monoxide					
Formula Weight	Fwt	28.01	28.01	28.01	28.01
Concentration, ppm (dry)	ppmvd	14.383	13.944	6.373	12.588
Concentration, ppm@7%O₂	ppm@7%O ₂	21.138	20.659	9.423	18.200

EMISSION RATE DATA SUMMARY

Client Name	Covanta Projects, Inc.	Operator	WHH
Plant Name	Huntington RRF	Project #	10731
Sampling Location	Unit 3 FF Outlet		

Run Number		9	10		
Run Date		8/6/10	8/6/10		
Run Start Time	hh:mm	1240	1319		
Run Stop Time	hh:mm	1304	1343		
Carbon Dioxide Percentage	% CO ₂	8.206	8.121		
Oxygen Percentage	% O ₂	11.304	11.444		
Dry Standard Stack Flow Rate	DSCFM	55,730	55,730		

Flow Rates taken from runs:

3-O-M4-2 3-O-M4-2

Sulfur Dioxide					
Formula Weight	Fwt	64.06	64.06		
Concentration, ppm (dry)	ppmvd	-0.942	-0.121		
Concentration, ppm@7%O₂	ppm@7%O ₂	-1.365	-0.178		

Nitrogen Oxides as NO₂					
Formula Weight	Fwt	46.01	46.01		
Concentration, ppm (dry)	ppmvd	75.940	78.360		
Concentration, ppm@7%O₂	ppm@7%O ₂	110.001	115.187		
Emission Rate, lb/hr	lb/hr	30.322	31.289		

Carbon Monoxide					
Formula Weight	Fwt	28.01	28.01		
Concentration, ppm (dry)	ppmvd	14.196	12.440		
Concentration, ppm@7%O₂	ppm@7%O ₂	20.563	18.286		

APPENDIX B

Reference Method Field Data

O₂, CO₂, SO₂, NO_x, CO

Calibration Error Test, Run 1 STRATA Version 3.2

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 1 Inlet and Outlet

	Reference Cylinder Numbers		
	Zero	Low-range	Mid-range
			High-range
O2-S		CC92828	CC252375
CO2-S		CC92828	CC252375
SO2-S		CC321220	CC61542
NOx-S	FF10803	CC331862	FF747
CO-S	SG9168169	SG9119307BAL	FF7925
O2-In		CC92828	CC252375
CO2-In		CC92828	CC252375
SO2-In		SG9154119BAL	XC022664B
THC-S	CC103598	FF53852	FF53866

Date/Time	08-03-2010	08:12:15	PASSED						
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000
Zero Avg	-0.005	0.060	0.161	0.73	0.311	0.002	-0.025	0.10	0.039
Zero Error%	0.0%	0.3%	0.2%	0.2%	0.3%	0.0%	0.1%	0.0%	0.1%
Low Ref Cyl			51.8	50.80					10.590
Low Avg				51.34					10.500
Low Error%				0.1%					0.3%
Mid Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	14.800
Mid Avg	10.003	8.978	49.186	236.52	45.554	10.002	8.955	242.67	14.833
Mid Error%	0.0%	0.1%	0.6%	0.0%	0.5%	0.0%	0.0%	0.1%	0.1%
High Ref Cyl	20.900	18.050	91.630	482.40	89.720	20.900	18.050	490.70	25.210
High Avg	20.901	17.891	92.578	484.39	90.365	20.949	17.940	485.07	25.213
High Error%	0.0%	0.9%	1.0%	0.4%	0.7%	0.2%	0.6%	1.1%	0.0%

Calibration Error Test End

Initial System Bias Check, Run 1 STRATA Version 3.2

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 1 Inlet and Outlet

Reference Cylinder Numbers

Zero	Span
O2-S	CC92828
CO2-S	CC92828
SO2-S	CC321220
NOx-S	CC331862
CO-S	SG9113307BAL SG9168169BAL FOR A1
O2-In	CC92828
CO2-In	CC92828
SO2-In	SG9154119BAL
THC-S	CC103598

Date/Time	08-03-2010		08:43:16		PASSED					
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm	
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	
Zero Cal	-0.005	0.060	0.161	0.73	0.311	0.002	-0.025	0.10	0.039	
Zero Avg	0.022	0.022	0.715	-0.47	-0.018	0.319	-0.027	1.87	-0.061	
Zero Bias%	0.1%	0.2%	0.6%	0.2%	0.4%	1.5%	0.0%	0.4%	0.3%	
Zero Drift%										
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	
Span Cal	10.003	8.978	49.186	236.52	45.554	10.002	8.955	242.67	10.500	
Span Avg	9.978	8.953	49.278	232.18	45.510	10.046	8.923	231.12	10.674	
Span Bias%	0.1%	0.1%	0.1%	0.9%	0.0%	0.2%	0.2%	2.4%	0.6%	
Span Drift%										
System Bias Check End										

Test Run 1 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-03-2010 08:46:21	11.176	8.486	2.413	80.43	18.261	10.187	9.450	91.20	0.479
08-03-2010 08:47:21	11.458	8.243	1.379	81.15	13.869	10.849	8.811	76.57	0.400
08-03-2010 08:48:21	11.441	8.211	1.120	82.40	14.900	10.918	8.733	68.06	0.248
08-03-2010 08:49:21	11.128	8.478	0.905	63.27	14.743	10.608	8.891	67.39	0.272
08-03-2010 08:50:21	11.497	8.184	0.722	57.81	16.016	10.884	8.975	64.97	0.250
08-03-2010 08:51:21	11.873	7.859	0.495	66.54	16.143	11.324	8.561	56.15	0.229
08-03-2010 08:52:21	11.896	7.811	0.377	60.38	18.949	11.421	8.277	51.23	0.194
08-03-2010 08:53:21	12.161	7.607	0.350	70.69	20.125	11.692	8.249	44.51	0.163
08-03-2010 08:54:21	11.943	7.715	0.274	85.36	18.398	11.542	8.091	39.86	0.132
08-03-2010 08:55:21	12.048	7.651	0.199	86.09	18.365	11.612	8.215	37.89	0.031
08-03-2010 08:56:21	12.170	7.522	0.172	85.45	17.783	11.786	8.040	36.13	-0.018
08-03-2010 08:57:21	11.526	8.037	0.199	80.83	20.503	11.149	8.154	34.48	-0.052
08-03-2010 08:58:21	11.582	8.025	0.161	65.29	19.011	11.126	8.595	35.29	-0.104
08-03-2010 08:59:21	11.591	7.970	0.032	74.56	14.456	11.154	8.462	31.54	0.398
08-03-2010 09:00:21	11.646	7.950	0.059	86.90	13.879	11.161	8.478	29.99	0.377
08-03-2010 09:01:21	11.827	7.790	0.059	78.85	16.536	11.406	8.335	29.28	0.335
08-03-2010 09:02:21	11.359	8.163	0.064	76.95	19.195	11.078	8.323	29.19	0.212
08-03-2010 09:03:21	11.061	8.415	0.054	95.15	19.101	10.618	8.832	34.46	0.015
08-03-2010 09:04:21	10.642	8.806	0.000	98.15	14.673	10.218	9.015	35.22	0.065
08-03-2010 09:05:21	10.885	8.651	0.070	95.94	14.165	10.350	9.267	36.09	0.663
08-03-2010 09:06:21	11.162	8.378	-0.097	103.72	15.794	10.470	9.082	33.42	0.582
08-03-2010 09:07:21	11.493	8.097	-0.064	93.48	15.379	11.232	8.577	31.09	0.283
08-03-2010 09:08:21	10.823	8.705	-0.059	78.69	21.174	10.442	8.758	33.77	0.231
08-03-2010 09:09:21	10.838	8.740	-0.124	83.01	18.712	10.310	9.269	52.05	0.070
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-03-2010 09:09:21	11.468	8.146	0.365	80.46	17.089	10.981	8.643	44.99	0.227

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 1 Inlet and Outlet

Test Run 1 End

Final System Bias Check, Run 1 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 1 Inlet and Outlet

Reference Cylinder Numbers

Zero Span

O2-S	CC92828
CO2-S	CC92828
SO2-S	CC321220
NOx-S	CC331862
CO-S	SG9113307BAL
O2-In	CC92828
CO2-In	CC92828
SO2-In	SG9154119BAL
THC-S	CC103598

Date/Time	08-03-2010	09:20:49	PASSED							
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm	
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	
Zero Cal	-0.005	0.060	0.161	0.73	0.311	0.002	-0.025	0.10	0.039	
Zero Avg	0.029	0.060	0.300	-0.47	2.242	0.285	-0.023	6.95	0.136	
Zero Bias%	0.2%	0.0%	0.2%	0.2%	2.2%	1.4%	0.0%	1.4%	0.3%	
Zero Drift%	0.0%	0.2%	-0.5%	0.0%	2.5%	-0.2%	0.0%	1.0%	0.7%	
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	
Span Cal	10.003	8.978	49.186	236.52	45.554	10.002	8.955	242.67	10.500	
Span Avg	9.969	8.997	47.525	235.66	45.824	10.050	8.784	239.72	10.729	
Span Bias%	0.2%	0.1%	1.8%	0.2%	0.3%	0.2%	1.0%	0.6%	0.8%	
Span Drift%	0.0%	0.2%	-1.9%	0.7%	0.3%	0.0%	-0.8%	1.8%	0.2%	
Ini Zero Avg	0.022	0.022	0.715	-0.47	-0.018	0.319	-0.027	1.87	-0.061	
Ini Span Avg	9.978	8.953	49.278	232.18	45.510	10.046	8.923	231.12	10.674	
Run Avg	11.468	8.146	0.365	80.46	17.089	10.981	8.643	44.99	0.227	
Co	0.025	0.041	0.508	-0.47	1.112	0.302	-0.025	4.41	0.038	
Cm	9.973	8.975	48.402	233.92	45.667	10.048	8.853	235.42	10.702	
Correct Avg	11.495	8.128	-0.145	81.70	16.162	10.950	8.748	42.55	0.188	
System Bias Check End										

Test Run 2 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-03-2010 09:25:01	10.457	9.095	0.124	109.10	10.549	9.744	9.596	50.27	0.104
08-03-2010 09:26:02	10.893	8.741	-0.054	94.46	8.932	10.391	9.280	46.86	0.065
08-03-2010 09:27:02	11.271	8.380	-0.083	88.81	10.209	10.684	9.056	45.12	0.064
08-03-2010 09:28:02	11.375	8.239	-0.150	58.43	13.387	10.966	8.708	46.28	-0.003
08-03-2010 09:29:02	10.964	8.641	-0.150	61.03	15.876	10.560	8.861	57.47	-0.072
08-03-2010 09:30:02	10.531	9.082	-0.194	85.19	13.824	10.342	9.161	67.07	-0.132
08-03-2010 09:31:02	9.864	9.644	-0.247	126.05	14.154	9.120	9.951	75.70	-0.195
08-03-2010 09:32:02	10.821	8.768	-0.188	124.43	9.171	10.253	9.655	73.37	-0.080
08-03-2010 09:33:02	11.016	8.574	-0.317	102.46	8.651	10.450	9.115	63.26	-0.029
08-03-2010 09:34:02	11.128	8.435	-0.231	76.04	10.911	10.776	8.837	61.60	-0.059
08-03-2010 09:35:02	10.984	8.590	-0.382	74.47	12.663	10.420	9.051	64.31	0.538
08-03-2010 09:36:02	11.160	8.404	-0.291	55.14	13.134	10.714	8.947	61.12	0.530
08-03-2010 09:37:02	10.627	8.889	-0.317	59.68	15.140	10.280	8.942	61.01	0.592
08-03-2010 09:38:02	10.746	8.867	-0.350	77.02	12.477	10.176	9.491	64.63	0.701
08-03-2010 09:39:02	10.128	9.413	-0.291	102.00	11.032	9.757	9.328	57.47	0.636
08-03-2010 09:40:02	10.777	8.796	-0.382	100.35	9.131	10.047	9.770	64.29	0.675
08-03-2010 09:41:02	11.287	8.303	-0.350	66.18	9.214	10.737	8.977	56.38	0.715
08-03-2010 09:42:02	11.507	8.083	-0.463	50.07	10.963	11.095	8.635	53.86	0.739
08-03-2010 09:43:02	11.155	8.363	-0.458	63.31	15.100	10.833	8.645	55.26	0.794
08-03-2010 09:44:02	10.855	8.692	-0.490	76.26	15.569	10.236	9.081	62.09	0.791
08-03-2010 09:45:02	11.270	8.315	-0.485	63.98	12.459	10.859	8.939	64.21	0.725
08-03-2010 09:46:02	11.069	8.533	-0.506	57.24	13.417	10.519	8.916	61.29	0.675
08-03-2010 09:47:02	11.124	8.492	-0.468	60.96	14.669	10.729	8.931	62.10	0.610
08-03-2010 09:48:02	11.088	8.565	-0.485	65.29	15.794	10.525	9.078	64.15	0.631
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-03-2010 09:48:02	10.920	8.663	-0.301	79.07	12.354	10.425	9.123	59.99	0.376

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 1 Inlet and Outlet

Test Run 2 End

Final System Bias Check, Run 2 STRATA Version 3.2

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 1 Inlet and Outlet

Reference Cylinder Numbers	
Zero	Span
O2-S	CC92828
CO2-S	CC92828
SO2-S	CC321220
NOx-S	CC331862
CO-S	SG9113307BAL
O2-In	CC92828
CO2-In	CC92828
SO2-In	SG9154119BAL
THC-S	CC103598

Date/Time	08-03-2010		10:08:35		PASSED								
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S				
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm				
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	0.00	0.00	0.000	0.000
Zero Cal	-0.005	0.060	0.161	0.73	0.311	0.002	-0.025	0.10	0.039	0.10	0.039	0.113	0.113
Zero Avg	0.025	0.088	-0.161	-0.52	3.369	0.232	-0.019	4.96	0.0%	1.0%	0.2%	0.0%	0.0%
Zero Bias%	0.1%	0.2%	0.4%	0.3%	3.4%	1.1%	0.0%	1.0%	0.2%	0.0%	-0.4%	-0.1%	-0.1%
Zero Drift%	0.0%	0.2%	-0.5%	0.0%	1.3%	-0.3%	0.0%	-0.4%	0.0%	-0.4%	-0.1%	-0.1%	-0.1%
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	242.20	10.590	242.20	10.590
Span Cal	10.003	8.978	49.186	236.52	45.554	10.002	8.955	242.67	10.500	242.67	10.500	242.67	10.500
Span Avg	9.969	9.042	47.986	237.03	45.024	10.039	8.807	231.35	10.536	231.35	10.536	231.35	10.536
Span Bias%	0.2%	0.4%	1.3%	0.1%	0.6%	0.2%	0.8%	2.3%	0.1%	2.3%	0.1%	2.3%	0.1%
Span Drift%	0.0%	0.2%	0.5%	0.3%	-0.9%	-0.1%	0.1%	-1.7%	0.6%	-1.7%	-0.6%	-0.6%	-0.6%
Ini Zero Avg	0.029	0.060	0.300	-0.47	2.242	0.285	-0.023	6.95	0.136	6.95	0.136	6.95	0.136
Ini Span Avg	9.969	8.997	47.525	235.66	45.824	10.050	8.784	239.72	10.729	239.72	10.729	239.72	10.729
Run Avg	10.920	8.663	-0.301	79.07	12.354	10.425	9.123	59.99	0.376	59.99	0.376	59.99	0.376
Co	0.027	0.074	0.069	-0.50	2.805	0.259	-0.021	5.95	0.124	5.95	0.124	5.95	0.124
Cm	9.969	9.020	47.755	236.35	45.424	10.045	8.795	235.53	10.632	235.53	10.632	235.53	10.632
Correct Avg	10.950	8.603	-0.377	79.48	10.098	10.383	9.293	57.00	0.254	57.00	0.254	57.00	0.254
System Bias Check End													

Test Run 3 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-03-2010 10:11:40	11.119	8.513	0.024	80.14	13.014	10.034	8.726	54.57	0.345
08-03-2010 10:12:40	10.926	8.725	-0.274	83.62	12.571	10.279	9.147	66.60	0.262
08-03-2010 10:13:40	10.731	8.877	-0.323	77.31	12.161	10.410	9.031	66.54	0.253
08-03-2010 10:14:40	10.553	9.082	-0.463	86.23	14.347	9.928	9.514	76.91	0.217
08-03-2010 10:15:40	10.744	8.895	-0.485	95.26	13.151	10.210	9.317	70.06	0.193
08-03-2010 10:16:40	11.133	8.507	-0.506	90.47	12.038	10.579	9.192	64.08	0.080
08-03-2010 10:17:40	10.670	8.911	-0.485	83.75	12.073	10.338	8.887	58.68	0.020
08-03-2010 10:18:40	10.657	8.992	-0.571	72.95	14.963	10.108	9.488	66.08	-0.045
08-03-2010 10:19:40	10.437	9.133	-0.598	82.84	12.945	9.975	9.347	62.20	-0.122
08-03-2010 10:20:40	10.514	9.066	-0.598	92.00	11.153	10.069	9.523	64.66	-0.041
08-03-2010 10:21:40	10.131	9.388	-0.625	114.09	10.341	9.630	9.565	64.67	-0.043
08-03-2010 10:22:40	10.522	9.087	-0.732	112.13	9.316	9.882	9.752	71.30	-0.123
08-03-2010 10:23:40	10.849	8.807	-0.781	85.27	7.998	10.275	9.310	66.21	-0.126
08-03-2010 10:24:40	10.965	8.663	-0.792	63.74	8.608	10.522	9.092	65.66	-0.186
08-03-2010 10:25:40	10.700	8.886	-0.765	64.50	11.619	10.262	9.182	72.02	-0.242
08-03-2010 10:26:40	10.448	9.155	-0.808	94.53	10.830	9.823	9.536	83.32	-0.223
08-03-2010 10:27:40	11.027	8.655	-0.808	102.57	9.007	10.501	9.354	86.99	-0.240
08-03-2010 10:28:40	11.061	8.611	-0.781	82.15	11.784	10.574	9.064	83.14	-0.258
08-03-2010 10:29:40	10.395	9.227	-0.808	76.10	14.919	10.003	9.172	85.56	-0.289
08-03-2010 10:30:40	10.693	8.955	-0.775	79.74	12.107	9.957	9.835	101.31	-0.271
08-03-2010 10:31:40	11.248	8.411	-0.808	78.34	9.757	10.818	9.000	94.17	-0.287
08-03-2010 10:32:40	11.088	8.575	-0.731	82.61	11.073	10.621	8.966	100.28	-0.263
08-03-2010 10:33:40	10.844	8.846	-0.458	89.36	12.925	10.241	9.198	119.46	-0.346
08-03-2010 10:34:40	11.495	8.240	0.043	74.93	13.762	11.001	9.050	123.03	-0.395
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-03-2010 10:34:40	10.790	8.842	-0.579	85.19	11.771	10.251	9.260	77.78	-0.088

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 1 Inlet and Outlet

Test Run 3 End

Final System Bias Check, Run 3 STRATA Version 3.2

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 1 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S		CC92828
CO2-S		CC92828
SO2-S		CC321220
NOx-S		CC331862
CO-S		SG9113307BAL
O2-In		CC92828
CO2-In		CC92828
SO2-In		SG9154119BAL
THC-S		CC103598

Date/Time	08-03-2010		10:45:17		PASSED					
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm	
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	
Zero Cal	-0.005	0.060	0.161	0.73	0.311	0.002	-0.025	0.10	0.039	
Zero Avg	0.022	0.105	-0.161	-0.47	2.040	0.197	-0.021	6.42	-0.157	
Zero Bias%	0.1%	0.2%	0.4%	0.2%	1.9%	0.9%	0.0%	1.3%	0.7%	
Zero Drift%	0.0%	0.1%	0.0%	0.0%	-1.5%	-0.2%	0.0%	0.3%	-0.9%	
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	
Span Cal	10.003	8.978	49.186	236.52	45.554	10.002	8.955	242.67	10.500	
Span Avg	9.965	9.038	49.325	235.82	44.226	10.023	8.931	242.53	10.432	
Span Bias%	0.2%	0.3%	0.2%	0.1%	1.5%	0.1%	0.1%	0.0%	0.2%	
Span Drift%	0.0%	0.0%	1.5%	-0.3%	-0.9%	-0.1%	0.7%	2.3%	-0.3%	
Ini Zero Avg	0.025	0.088	-0.161	-0.52	3.369	0.232	-0.019	4.96	0.113	
Ini Span Avg	9.969	9.042	47.986	237.03	45.024	10.039	8.807	231.35	10.536	
Run Avg	10.790	8.842	-0.579	85.19	11.771	10.251	9.260	77.78	-0.088	
Co	0.024	0.096	-0.161	-0.49	2.704	0.215	-0.020	5.69	-0.022	
Cm	9.967	9.040	48.655	236.43	44.625	10.031	8.869	236.94	10.484	
Correct Avg	10.821	8.761	-0.416	85.57	9.747	10.218	9.354	75.51	-0.067	
System Bias Check End										

Test Run 4 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-03-2010 10:48:08	11.481	8.151	0.972	59.76	17.715	10.180	8.201	63.63	0.101
08-03-2010 10:49:08	11.345	8.290	0.463	61.00	19.059	10.814	8.631	72.72	-0.059
08-03-2010 10:50:08	11.555	8.152	0.102	77.84	16.081	11.015	8.785	73.92	-0.109
08-03-2010 10:51:08	11.894	7.858	0.054	74.21	17.435	11.357	8.491	69.87	0.113
08-03-2010 10:52:08	11.891	7.820	-0.156	67.86	20.813	11.556	8.166	65.21	0.067
08-03-2010 10:53:08	11.751	7.956	-0.285	88.53	16.754	11.206	8.494	62.12	-0.067
08-03-2010 10:54:08	11.964	7.828	-0.490	77.47	17.188	11.508	8.331	59.31	-0.155
08-03-2010 10:55:08	11.884	7.833	-0.555	73.82	19.829	11.519	8.195	52.41	-0.230
08-03-2010 10:56:08	11.705	8.011	-0.490	81.69	18.972	11.393	8.371	52.46	-0.246
08-03-2010 10:57:08	11.038	8.625	-0.603	78.06	18.533	10.637	8.774	53.35	-0.222
08-03-2010 10:58:08	10.889	8.731	-0.657	80.39	16.227	10.438	9.108	55.40	-0.317
08-03-2010 10:59:08	10.613	9.002	-0.840	82.39	15.746	10.264	9.324	53.17	-0.398
08-03-2010 11:00:08	9.817	9.717	-0.808	87.84	13.440	9.273	9.779	53.55	-0.368
08-03-2010 11:01:08	10.017	9.576	-0.727	98.62	8.859	9.441	10.062	56.55	-0.521
08-03-2010 11:02:08	10.552	9.053	-0.846	127.77	7.143	9.882	9.850	52.42	-0.406
08-03-2010 11:03:08	10.782	8.845	-0.872	145.94	9.206	10.307	9.245	43.97	-0.478
08-03-2010 11:04:08	11.105	8.573	-0.889	139.75	9.383	10.545	9.171	41.43	-0.403
08-03-2010 11:05:08	11.319	8.356	-0.878	101.10	11.697	10.908	8.796	38.13	-0.338
08-03-2010 11:06:08	11.312	8.324	-1.023	63.89	16.341	10.899	8.727	36.65	-0.490
08-03-2010 11:07:08	11.174	8.424	-0.964	53.07	13.223	10.744	8.830	36.77	-0.238
08-03-2010 11:08:08	11.172	8.444	-1.099	59.98	10.858	10.756	8.898	37.51	-0.211
08-03-2010 11:09:08	11.193	8.471	-1.093	61.75	14.695	10.691	8.994	38.71	-0.293
08-03-2010 11:10:08	11.039	8.570	-1.066	61.62	14.874	10.635	8.895	36.93	-0.181
08-03-2010 11:11:08	10.788	8.824	-0.953	73.61	16.196	10.263	9.170	42.03	-0.128
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-03-2010 11:11:08	11.178	8.476	-0.570	82.40	15.013	10.676	8.887	52.02	-0.232

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 1 Inlet and Outlet

Test Run 4 End

Final System Bias Check, Run 4 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 1 Inlet and Outlet

Reference Cylinder Numbers
Zero Span

O2-S	CC92828
CO2-S	CC92828
SO2-S	CC321220
NOx-S	CC331862
CO-S	SG9113307BAL
O2-In	CC92828
CO2-In	CC92828
SO2-In	SG9154119BAL
THC-S	CC103598

Date/Time	08-03-2010		11:21:16		PASSED				
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000
Zero Cal	-0.005	0.060	0.161	0.73	0.311	0.002	-0.025	0.10	0.039
Zero Avg	0.023	0.091	-0.346	-0.43	0.739	0.206	-0.025	3.54	0.167
Zero Bias%	0.1%	0.2%	0.6%	0.2%	0.5%	1.0%	0.0%	0.7%	0.4%
Zero Drift%	0.0%	-0.1%	-0.2%	0.0%	-1.4%	0.0%	0.0%	-0.6%	1.1%
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590
Span Cal	10.003	8.978	49.186	236.52	45.554	10.002	8.955	242.67	10.500
Span Avg	9.970	9.016	47.986	236.29	45.426	10.023	8.898	232.47	10.643
Span Bias%	0.2%	0.2%	1.3%	0.0%	0.1%	0.1%	0.3%	2.1%	0.5%
Span Drift%	0.0%	-0.1%	-1.5%	0.1%	1.3%	0.0%	-0.2%	-2.1%	0.7%
Ini Zero Avg	0.022	0.105	-0.161	-0.47	2.040	0.197	-0.021	6.42	-0.157
Ini Span Avg	9.965	9.038	49.325	235.82	44.226	10.023	8.931	242.53	10.432
Run Avg	11.178	8.476	-0.570	82.40	15.013	10.676	8.887	52.02	-0.232
Co	0.023	0.098	-0.254	-0.45	1.390	0.202	-0.023	4.98	0.005
Cm	9.968	9.027	48.655	236.05	44.826	10.023	8.915	237.50	10.538
Correct Avg	11.211	8.407	-0.315	82.88	14.136	10.658	8.932	49.00	-0.238
System Bias Check End									

Test Run 5 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-03-2010 11:24:50	11.099	8.456	0.103	72.73	8.279	10.549	8.945	92.47	0.371
08-03-2010 11:25:50	11.052	8.517	0.172	80.04	10.605	10.553	9.004	105.41	0.327
08-03-2010 11:26:49	11.234	8.414	0.402	82.21	11.859	10.601	9.008	113.37	0.351
08-03-2010 11:27:49	11.245	8.363	0.393	70.77	11.535	10.875	8.726	110.20	0.319
08-03-2010 11:28:49	11.025	8.583	0.506	67.41	12.656	10.591	8.969	115.83	0.224
08-03-2010 11:29:49	10.910	8.733	1.190	73.06	11.391	10.419	9.145	129.52	0.168
08-03-2010 11:30:49	10.742	8.858	3.495	90.90	9.086	10.181	9.234	149.99	0.125
08-03-2010 11:31:49	11.212	8.436	5.170	78.88	10.180	10.721	9.109	150.46	-0.006
08-03-2010 11:32:49	11.396	8.260	5.078	55.48	12.479	10.908	8.819	146.80	0.146
08-03-2010 11:33:49	11.276	8.341	4.842	45.89	16.887	10.900	8.675	141.15	0.449
08-03-2010 11:34:49	10.614	9.014	5.041	73.34	17.771	10.203	9.068	142.92	0.418
08-03-2010 11:35:49	10.625	9.066	3.700	96.80	13.473	10.108	9.502	135.11	0.432
08-03-2010 11:36:49	10.707	8.975	2.741	111.03	14.017	10.225	9.401	119.25	0.477
08-03-2010 11:37:49	10.619	9.027	2.423	102.16	14.837	10.058	9.383	108.01	0.626
08-03-2010 11:38:49	10.883	8.826	1.621	80.21	12.803	10.356	9.300	104.93	0.605
08-03-2010 11:39:49	11.215	8.492	1.104	67.60	13.405	10.693	9.117	101.53	0.581
08-03-2010 11:40:49	11.025	8.651	0.786	60.69	16.078	10.594	8.961	95.58	0.513
08-03-2010 11:41:49	11.018	8.681	0.549	64.77	14.408	10.431	9.222	103.67	0.514
08-03-2010 11:42:49	10.935	8.742	0.641	78.47	14.853	10.604	9.010	101.28	0.617
08-03-2010 11:43:49	10.607	9.042	0.425	99.11	13.587	10.126	9.370	106.26	0.759
08-03-2010 11:44:49	10.729	9.001	0.301	103.96	11.699	10.118	9.494	102.10	0.623
08-03-2010 11:45:49	10.962	8.785	0.167	88.38	10.108	10.437	9.240	92.35	0.670
08-03-2010 11:46:49	11.289	8.464	-0.038	67.37	11.171	10.776	9.081	89.54	0.572
08-03-2010 11:47:49	11.216	8.481	-0.188	65.34	12.553	10.816	8.803	82.90	0.573
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-03-2010 11:47:49	10.985	8.675	1.693	78.18	12.736	10.493	9.108	114.18	0.436

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 1 Inlet and Outlet

Test Run 5 End

Final System Bias Check, Run 5 STRATA Version 3.2

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 1 Inlet and Outlet

	Reference Cylinder Numbers
Zero	Span
O2-S	CC92828
CO2-S	CC92828
SO2-S	CC321220
NOx-S	CC331862
CO-S	SG9113307BAL
O2-In	CC92828
CO2-In	CC92828
SO2-In	SG9154119BAL
THC-S	CC103598

Date/Time	08-03-2010		11:58:50		PASSED				
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000
Zero Cal	-0.005	0.060	0.161	0.73	0.311	0.002	-0.025	0.10	0.039
Zero Avg	0.028	0.086	-0.207	-0.42	1.627	0.191	-0.026	3.19	0.111
Zero Bias%	0.2%	0.1%	0.4%	0.2%	1.5%	0.9%	0.0%	0.6%	0.2%
Zero Drift%	0.0%	0.0%	0.2%	0.0%	1.0%	-0.1%	0.0%	-0.1%	-0.2%
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590
Span Cal	10.003	8.978	49.186	236.52	45.554	10.002	8.955	242.67	10.500
Span Avg	9.985	9.042	46.601	239.47	44.724	10.012	8.896	233.92	10.857
Span Bias%	0.1%	0.4%	2.8%	0.6%	0.9%	0.0%	0.3%	1.8%	1.2%
Span Drift%	0.1%	0.1%	-1.5%	0.7%	-0.8%	-0.1%	0.0%	0.3%	0.7%
Ini Zero Avg	0.023	0.091	-0.346	-0.43	0.739	0.206	-0.025	3.54	0.167
Ini Span Avg	9.970	9.016	47.986	236.29	45.426	10.023	8.898	232.47	10.643
Run Avg	10.985	8.675	1.693	78.18	12.736	10.493	9.108	114.18	0.436
Co	0.025	0.089	-0.277	-0.43	1.183	0.198	-0.026	3.37	0.139
Cm	9.977	9.029	47.294	237.88	45.075	10.017	8.897	233.19	10.750
Correct Avg	11.006	8.606	2.014	78.05	11.862	10.479	9.171	116.78	0.296
System Bias Check End									

Test Run 6 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-03-2010 12:03:13	11.174	8.513	-0.166	60.67	9.536	10.720	9.027	64.70	0.360
08-03-2010 12:04:13	10.876	8.791	-0.355	50.98	11.987	10.288	9.121	62.23	0.302
08-03-2010 12:05:13	10.938	8.687	-0.447	51.75	10.231	10.457	9.106	57.72	0.278
08-03-2010 12:06:13	11.150	8.514	-0.592	66.69	9.216	10.651	9.112	54.23	0.365
08-03-2010 12:07:13	10.796	8.812	-0.759	81.08	12.979	10.305	9.026	51.26	0.392
08-03-2010 12:08:13	10.558	9.034	-0.711	111.10	11.529	10.050	9.391	59.06	0.346
08-03-2010 12:09:13	10.643	8.960	-0.829	123.72	10.724	10.161	9.385	57.43	0.302
08-03-2010 12:10:13	10.491	9.071	-0.786	115.11	12.490	9.955	9.413	55.24	0.264
08-03-2010 12:11:13	10.702	8.941	-0.894	95.66	10.876	10.139	9.420	54.94	0.228
08-03-2010 12:12:13	10.937	8.732	-1.056	81.23	10.465	10.377	9.217	52.17	0.234
08-03-2010 12:13:13	10.872	8.752	-1.072	74.59	15.293	10.449	9.021	48.19	0.182
08-03-2010 12:14:13	10.640	8.948	-1.088	80.81	12.834	10.158	9.305	48.76	0.172
08-03-2010 12:15:13	10.571	9.061	-1.120	80.68	12.264	9.880	9.568	50.49	0.229
08-03-2010 12:16:13	11.106	8.547	-1.137	85.61	11.356	10.701	9.171	47.78	0.248
08-03-2010 12:17:13	10.900	8.741	-1.147	100.14	9.173	10.294	9.113	41.38	0.220
08-03-2010 12:18:13	11.182	8.505	-1.201	86.18	7.945	10.681	9.002	40.28	0.190
08-03-2010 12:19:13	11.409	8.294	-1.196	74.80	10.419	10.952	8.810	38.66	0.224
08-03-2010 12:20:13	11.185	8.481	-1.228	77.78	11.121	10.698	8.803	38.28	0.119
08-03-2010 12:21:13	11.147	8.522	-1.341	67.67	11.754	10.775	8.878	41.52	0.093
08-03-2010 12:22:13	10.478	9.146	-1.223	96.29	15.818	10.111	9.142	43.12	0.059
08-03-2010 12:23:13	10.452	9.215	-1.163	122.27	12.751	9.811	9.755	44.98	0.029
08-03-2010 12:24:13	10.969	8.711	-1.234	113.97	8.831	10.402	9.379	41.08	-0.003
08-03-2010 12:25:13	11.006	8.624	-1.352	99.45	9.064	10.466	9.076	39.59	0.118
08-03-2010 12:26:13	11.213	8.412	-1.309	81.19	8.654	10.797	8.920	41.09	0.114
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-03-2010 12:26:13	10.892	8.750	-0.975	86.62	11.137	10.387	9.173	48.94	0.211

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 1 Inlet and Outlet

Test Run 6 End

Final System Bias Check, Run 6 STRATA Version 3.2

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 1 Inlet and Outlet

	Reference Cylinder Numbers
Zero	Span
O2-S	CC92828
CO2-S	CC92828
SO2-S	CC321220
NOx-S	CC331862
CO-S	SG9113307BAL
O2-In	CC92828
CO2-In	CC92828
SO2-In	SG9154119BAL
THC-S	CC103598

Date/Time	08-03-2010		12:36:49		PASSED								
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S				
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm				
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	0.00	0.000	0.000	0.000
Zero Cal	-0.005	0.060	0.161	0.73	0.311	0.002	-0.025	0.10	0.039	0.10	0.039	0.10	0.039
Zero Avg	0.033	0.073	-0.808	-0.43	0.853	0.182	-0.026	2.43	-0.110	2.43	-0.110	2.43	-0.110
Zero Bias%	0.2%	0.1%	1.1%	0.2%	0.6%	0.9%	0.0%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Zero Drift%	0.0%	-0.1%	-0.7%	0.0%	-0.9%	0.0%	0.0%	-0.2%	-0.7%	-0.2%	-0.7%	-0.2%	-0.7%
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	242.20	10.590	242.20	10.590
Span Cal	10.003	8.978	49.186	236.52	45.554	10.002	8.955	242.67	10.500	242.67	10.500	242.67	10.500
Span Avg	9.982	9.036	45.632	239.95	45.083	10.009	8.845	235.17	10.367	235.17	10.367	235.17	10.367
Span Bias%	0.1%	0.3%	3.9%	0.7%	0.5%	0.0%	0.6%	1.5%	0.4%	1.5%	0.4%	1.5%	0.4%
Span Drift%	0.0%	0.0%	-1.1%	0.1%	0.4%	0.0%	-0.3%	0.3%	-1.6%	0.3%	-1.6%	0.3%	-1.6%
Ini Zero Avg	0.028	0.086	-0.207	-0.42	1.627	0.191	-0.026	3.19	0.111	3.19	0.111	3.19	0.111
Ini Span Avg	9.985	9.042	46.601	239.47	44.724	10.012	8.896	233.92	10.857	233.92	10.857	233.92	10.857
Run Avg	10.892	8.750	-0.975	86.62	11.137	10.387	9.173	48.94	0.211	48.94	0.211	48.94	0.211
Co	0.030	0.080	-0.508	-0.43	1.240	0.186	-0.026	2.81	0.000	2.81	0.000	2.81	0.000
Cm.	9.983	9.039	46.117	239.71	44.904	10.010	8.871	234.54	10.612	234.54	10.612	234.54	10.612
Correct Avg	10.906	8.672	-0.488	85.77	10.215	10.377	9.265	48.21	0.210	48.21	0.210	48.21	0.210
System Bias Check End													

Test Run 7 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-03-2010 12:39:30	10.624	8.976	-0.108	80.61	13.584	9.293	8.293	37.21	0.448
08-03-2010 12:40:30	10.910	8.751	-0.528	105.21	13.137	10.139	9.469	56.60	0.458
08-03-2010 12:41:30	10.975	8.665	-0.819	114.20	12.879	10.589	8.927	51.18	0.404
08-03-2010 12:42:30	10.824	8.798	-0.937	109.91	10.683	10.308	9.188	52.02	0.374
08-03-2010 12:43:30	10.437	9.138	-1.029	94.63	12.088	10.110	9.278	55.96	0.330
08-03-2010 12:44:30	10.395	9.235	-1.029	100.59	11.781	9.695	9.726	71.62	0.299
08-03-2010 12:45:30	10.770	8.872	-1.153	88.78	11.127	10.338	9.350	69.69	0.287
08-03-2010 12:46:30	10.931	8.766	-1.147	86.92	11.825	10.386	9.302	67.95	0.298
08-03-2010 12:47:30	10.751	8.861	-1.126	95.29	9.902	10.385	9.070	66.25	0.305
08-03-2010 12:48:30	10.602	9.019	-1.137	100.90	8.548	9.953	9.424	72.99	0.272
08-03-2010 12:49:30	11.108	8.559	-1.368	89.67	8.386	10.687	9.103	74.26	0.274
08-03-2010 12:50:30	10.607	8.987	-1.266	106.35	10.985	10.266	9.033	73.45	0.259
08-03-2010 12:51:30	10.580	9.057	-1.255	119.64	9.652	9.972	9.519	77.72	0.210
08-03-2010 12:52:30	10.562	9.028	-1.266	107.88	9.031	10.127	9.318	72.16	0.261
08-03-2010 12:53:30	10.831	8.829	-1.379	99.81	9.015	10.225	9.437	72.37	0.252
08-03-2010 12:54:30	10.859	8.764	-1.298	117.09	7.633	10.346	9.125	65.81	0.315
08-03-2010 12:55:30	11.209	8.444	-1.298	86.22	6.633	10.750	8.997	62.78	0.240
08-03-2010 12:56:30	10.965	8.652	-1.298	85.66	8.591	10.538	8.889	61.91	0.193
08-03-2010 12:57:30	11.229	8.462	-1.390	68.42	10.520	10.694	9.007	66.51	0.194
08-03-2010 12:58:30	10.848	8.804	-1.255	77.07	9.659	10.480	8.866	60.58	0.190
08-03-2010 12:59:30	11.200	8.522	-1.454	89.21	9.082	10.547	9.203	63.12	0.191
08-03-2010 13:00:30	11.425	8.295	-1.384	77.22	8.972	11.020	8.697	56.72	0.119
08-03-2010 13:01:30	11.210	8.488	-1.309	76.92	9.680	10.726	8.809	59.82	0.076
08-03-2010 13:02:30	11.324	8.433	-1.449	69.10	8.206	10.834	8.835	60.00	0.119
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-03-2010 13:02:30	10.882	8.767	-1.153	93.64	10.067	10.350	9.119	63.69	0.265

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 1 Inlet and Outlet

Test Run 7 End

Final System Bias Check, Run 7 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 1 Inlet and Outlet

Reference Cylinder Numbers

Zero Span

O2-S	CC92828
CO2-S	CC92828
SO2-S	CC321220
NOx-S	CC331862
CO-S	SG9113307BAL
O2-In	CC92828
CO2-In	CC92828
SO2-In	SG9154119BAL
THC-S	CC103598

Date/Time	08-03-2010		13:13:11		PASSED					
Analyte	O2-S	CO2-S	SO2-S	ppm	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S
Units	%	%	%	ppm	ppm	ppm	%	%	ppm	ppm
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.000	0.00	0.000
Zero Cal	-0.005	0.060	0.161	0.73	0.311	0.002	-0.025	0.10	0.039	
Zero Avg	0.028	0.124	-0.808	-0.46	1.515	0.171	-0.024	2.41	0.045	
Zero Bias%	0.2%	0.4%	1.1%	0.2%	1.3%	0.8%	0.0%	0.5%	0.0%	0.0%
Zero Drift%	0.0%	0.3%	0.0%	0.0%	0.7%	-0.1%	0.0%	0.0%	0.0%	0.5%
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	
Span Cal	10.003	8.978	49.186	236.52	45.554	10.002	8.955	242.67	10.500	
Span Avg	9.974	9.098	45.124	240.52	44.953	10.003	8.934	236.90	10.469	
Span Bias%	0.1%	0.7%	4.4%	0.8%	0.7%	0.0%	0.1%	1.2%	0.1%	
Span Drift%	0.0%	0.3%	-0.6%	0.1%	-0.1%	0.0%	0.5%	0.4%	0.3%	
Ini Zero Avg	0.033	0.073	-0.808	-0.43	0.853	0.182	-0.026	2.43	-0.110	
Ini Span Avg	9.982	9.036	45.632	239.95	45.083	10.009	8.845	235.17	10.367	
Run Avg	10.882	8.767	-1.153	93.64	10.067	10.350	9.119	63.69	0.265	
Co	0.030	0.099	-0.808	-0.44	1.184	0.177	-0.025	2.42	-0.033	
Cm	9.978	9.067	45.378	240.24	45.018	10.006	8.889	236.04	10.418	
Correct Avg	10.902	8.660	-0.364	92.49	9.133	10.344	9.191	63.52	0.302	
System Bias Check End										

Test Run 8 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-03-2010 13:17:04	11.303	8.503	-0.644	69.21	14.866	10.789	9.012	68.15	0.301
08-03-2010 13:18:04	11.234	8.572	-1.002	83.40	12.684	10.899	8.815	59.41	0.280
08-03-2010 13:19:03	10.622	9.146	-0.896	86.53	13.818	10.142	9.095	61.95	0.236
08-03-2010 13:20:03	10.911	8.895	-1.126	73.12	13.673	10.485	9.350	84.04	0.216
08-03-2010 13:21:03	10.739	9.025	-1.137	69.20	14.078	10.292	9.274	77.95	0.163
08-03-2010 13:22:03	10.506	9.273	-1.228	73.46	11.098	9.985	9.463	81.11	0.134
08-03-2010 13:23:03	10.703	9.055	-1.002	74.14	8.485	10.267	9.428	114.03	0.106
08-03-2010 13:24:03	10.738	8.998	-0.996	79.00	8.043	10.168	9.411	110.99	0.132
08-03-2010 13:25:03	11.036	8.721	-0.986	91.03	6.540	10.646	9.053	96.48	0.108
08-03-2010 13:26:03	10.522	9.197	-0.856	101.64	8.956	10.179	9.189	90.50	0.136
08-03-2010 13:27:03	10.287	9.489	-0.608	120.63	11.609	9.697	9.763	109.29	0.153
08-03-2010 13:28:03	10.796	9.052	-0.382	104.51	8.914	10.284	9.541	115.95	0.133
08-03-2010 13:29:03	10.836	8.959	-0.199	73.18	10.638	10.498	9.162	115.25	0.099
08-03-2010 13:30:03	10.939	8.869	-0.107	72.64	12.487	10.285	9.412	120.69	0.095
08-03-2010 13:31:03	11.034	8.746	-0.027	68.09	12.230	10.729	8.938	104.72	0.094
08-03-2010 13:32:03	10.732	9.023	0.474	68.68	14.247	10.337	9.249	123.52	0.091
08-03-2010 13:33:03	10.845	8.948	2.246	76.27	12.924	10.157	9.442	150.05	0.128
08-03-2010 13:34:03	11.356	8.454	2.553	75.29	12.605	10.973	8.868	132.94	0.163
08-03-2010 13:35:03	10.660	9.098	4.357	85.34	18.385	10.261	8.997	143.63	0.091
08-03-2010 13:36:03	11.009	8.788	4.712	83.34	15.120	10.419	9.443	149.17	0.040
08-03-2010 13:37:03	10.992	8.786	3.258	66.79	16.912	10.715	8.899	118.51	0.032
08-03-2010 13:38:03	10.805	8.942	2.989	78.27	18.800	10.115	9.414	129.60	0.033
08-03-2010 13:39:03	11.267	8.473	1.373	70.37	14.154	10.914	8.858	98.68	0.002
08-03-2010 13:40:03	10.882	8.808	0.517	73.26	14.020	10.463	8.982	94.34	0.042
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-03-2010 13:40:03	10.865	8.909	0.470	79.88	12.721	10.405	9.211	106.29	0.125

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 1 Inlet and Outlet

Test Run 8 End

Final System Bias Check, Run 8 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 1 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S		CC92828
CO2-S		CC92828
SO2-S		CC321220
NOx-S		CC331862
CO-S		SG9113307BAL
O2-In		CC92828
CO2-In		CC92828
SO2-In		SG9154119BAL
THC-S		CC103598

Date/Time	08-03-2010		13:49:48		PASSED					
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm	
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	
Zero Cal	-0.005	0.060	0.161	0.73	0.311	0.002	-0.025	0.10	0.039	
Zero Avg	0.028	0.163	-0.808	-0.44	1.298	0.157	-0.024	2.41	-0.188	
Zero Bias%	0.2%	0.6%	1.1%	0.2%	1.1%	0.7%	0.0%	0.5%	0.8%	
Zero Drift%	0.0%	0.2%	0.0%	0.0%	-0.2%	-0.1%	0.0%	0.0%	-0.8%	
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	
Span Cal	10.003	8.978	49.186	236.52	45.554	10.002	8.955	242.67	10.500	
Span Avg	9.966	9.123	46.186	237.65	44.620	9.997	8.929	234.62	10.488	
Span Bias%	0.2%	0.8%	3.3%	0.2%	1.0%	0.0%	0.1%	1.6%	0.0%	
Span Drift%	0.0%	0.1%	1.2%	-0.6%	-0.4%	0.0%	0.0%	-0.5%	0.1%	
Ini Zero Avg	0.028	0.124	-0.808	-0.46	1.515	0.171	-0.024	2.41	0.045	
Ini Span Avg	9.974	9.098	45.124	240.52	44.953	10.003	8.934	236.90	10.469	
Run Avg	10.865	8.909	0.470	79.88	12.721	10.405	9.211	106.29	0.125	
Co	0.028	0.144	-0.808	-0.45	1.406	0.164	-0.024	2.41	-0.072	
Cm	9.970	9.111	45.655	239.08	44.787	10.000	8.932	235.76	10.479	
Correct Avg	10.893	8.758	1.339	79.34	11.755	10.405	9.239	107.82	0.198	
System Bias Check End										

Test Run 9 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-03-2010 13:52:41	10.743	8.916	0.221	104.21	7.212	9.554	8.701	53.19	0.085
08-03-2010 13:53:41	10.777	8.921	-0.253	107.33	10.311	10.077	9.402	66.65	0.057
08-03-2010 13:54:41	11.069	8.675	-0.549	91.36	10.574	10.726	8.915	54.96	0.069
08-03-2010 13:55:41	11.296	8.497	-0.781	62.50	11.428	10.766	9.031	52.59	0.129
08-03-2010 13:56:41	11.079	8.650	-0.813	64.53	11.317	10.811	8.706	51.69	0.141
08-03-2010 13:57:41	10.834	8.923	-0.867	84.33	13.801	10.271	9.203	52.89	0.093
08-03-2010 13:58:41	10.876	8.907	-1.045	90.72	12.610	10.521	9.091	52.50	0.095
08-03-2010 13:59:41	10.978	8.867	-1.110	85.71	17.102	10.419	9.348	57.98	0.121
08-03-2010 14:00:41	10.960	8.803	-1.093	85.62	12.434	10.548	9.003	44.73	0.145
08-03-2010 14:01:41	10.996	8.807	-1.234	79.02	10.441	10.541	9.104	47.28	0.107
08-03-2010 14:02:41	11.054	8.748	-1.341	79.13	11.331	10.564	9.079	50.62	0.021
08-03-2010 14:03:41	11.083	8.690	-1.287	76.56	13.315	10.797	8.933	51.56	-0.036
08-03-2010 14:04:41	10.868	8.902	-1.309	78.56	13.474	10.291	9.136	53.55	-0.050
08-03-2010 14:05:41	11.100	8.677	-1.223	70.74	11.505	10.694	8.989	55.21	0.035
08-03-2010 14:06:42	11.006	8.728	-1.314	79.00	11.700	10.574	8.986	61.12	0.011
08-03-2010 14:07:42	10.911	8.815	-1.379	90.66	11.621	10.496	9.028	55.73	0.007
08-03-2010 14:08:42	10.987	8.777	-1.287	76.30	12.020	10.435	9.183	63.47	0.037
08-03-2010 14:09:42	11.128	8.640	-1.497	90.65	11.321	10.764	8.923	61.95	0.009
08-03-2010 14:10:42	10.571	9.157	-1.460	97.09	12.335	10.187	9.099	53.68	-0.006
08-03-2010 14:11:42	10.652	9.147	-1.530	88.00	14.154	10.124	9.497	68.72	-0.046
08-03-2010 14:12:42	10.637	9.115	-1.503	93.04	14.830	10.184	9.342	60.61	0.076
08-03-2010 14:13:42	10.662	9.107	-1.454	75.34	14.421	10.229	9.364	62.05	0.040
08-03-2010 14:14:42	10.393	9.310	-1.557	87.64	10.785	9.864	9.483	69.89	0.032
08-03-2010 14:15:42	10.742	9.029	-1.433	95.86	10.070	10.309	9.417	64.13	0.010
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-03-2010 14:15:42	10.892	8.867	-1.129	84.75	12.088	10.406	9.124	56.95	0.049

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 1 Inlet and Outlet

Test Run 9 End

Final System Bias Check, Run 9 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 1 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S		CC92828
CO2-S		CC92828
SO2-S		CC321220
NOx-S		CC331862
CO-S		SG9113307BAL
O2-In		CC92828
CO2-In		CC92828
SO2-In		SG9154119BAL
THC-S		CC103598

Date/Time	08-03-2010	14:25:51	PASSED							
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm	
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.00	0.000
Zero Cal	-0.005	0.060	0.161	0.73	0.311	0.002	-0.025	0.10	0.039	
Zero Avg	0.025	0.188	-0.808	-0.43	0.542	0.146	-0.020	2.56	-0.106	
Zero Bias%	0.1%	0.7%	1.1%	0.2%	0.3%	0.7%	0.0%	0.5%	0.5%	
Zero Drift%	0.0%	0.1%	0.0%	0.0%	-0.8%	-0.1%	0.0%	0.0%	0.3%	
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	
Span Cal	10.003	8.978	49.186	236.52	45.554	10.002	8.955	242.67	10.500	
Span Avg	9.966	9.152	44.847	236.38	44.226	9.986	8.873	236.63	10.504	
Span Bias%	0.2%	1.0%	4.7%	0.0%	1.5%	0.1%	0.5%	1.2%	0.0%	
Span Drift%	0.0%	0.2%	-1.5%	-0.3%	-0.4%	0.0%	-0.3%	0.4%	0.1%	
Ini Zero Avg	0.028	0.163	-0.808	-0.44	1.298	0.157	-0.024	2.41	-0.188	
Ini Span Avg	9.966	9.123	46.186	237.65	44.620	9.997	8.929	234.62	10.488	
Run Avg	10.892	8.867	-1.129	84.75	12.088	10.406	9.124	56.95	0.049	
Co	0.027	0.176	-0.808	-0.44	0.920	0.151	-0.022	2.48	-0.147	
Cm	9.966	9.138	45.516	237.02	44.423	9.991	8.901	235.62	10.496	
Correct Avg	10.924	8.690	-0.338	84.88	11.570	10.415	9.183	56.58	0.195	
System Bias Check End										

Test Run 10 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-03-2010 14:29:18	10.588	9.181	-0.635	103.41	13.948	9.719	9.217	31.24	0.400
08-03-2010 14:30:18	10.781	9.023	-0.883	113.37	12.583	10.229	9.367	35.19	0.438
08-03-2010 14:31:18	10.997	8.762	-0.943	93.26	13.477	10.541	9.152	35.70	0.368
08-03-2010 14:32:18	10.761	8.972	-1.131	89.97	15.283	10.376	9.131	36.02	0.267
08-03-2010 14:33:18	9.886	9.817	-1.271	102.47	15.543	9.385	9.620	38.76	0.259
08-03-2010 14:34:18	10.712	9.023	-1.271	96.07	11.720	10.073	9.884	42.00	0.267
08-03-2010 14:35:18	10.950	8.771	-1.374	73.73	11.835	10.536	9.029	32.54	0.262
08-03-2010 14:36:18	10.815	8.906	-1.406	82.38	13.140	10.383	9.135	30.61	0.254
08-03-2010 14:37:18	10.908	8.853	-1.379	90.18	12.163	10.515	9.101	30.72	0.300
08-03-2010 14:38:18	10.651	9.079	-1.331	90.84	11.942	10.236	9.251	31.00	0.231
08-03-2010 14:39:19	10.525	9.196	-1.411	97.87	13.204	9.971	9.393	30.29	0.247
08-03-2010 14:40:19	10.849	8.888	-1.454	80.57	13.006	10.476	9.302	28.53	0.574
08-03-2010 14:41:19	10.606	9.141	-1.465	70.26	14.472	10.113	9.355	30.29	0.550
08-03-2010 14:42:19	10.384	9.305	-1.401	81.10	11.589	10.078	9.335	31.82	0.533
08-03-2010 14:43:19	10.097	9.546	-1.449	116.52	10.133	9.533	9.798	40.34	0.513
08-03-2010 14:44:19	10.104	9.485	-1.573	122.29	7.191	9.691	9.631	41.56	0.496
08-03-2010 14:45:19	10.284	9.339	-1.492	110.67	7.044	9.660	9.767	46.07	0.483
08-03-2010 14:46:19	10.804	8.838	-1.594	87.41	6.283	10.230	9.371	53.33	0.492
08-03-2010 14:47:19	11.359	8.317	-1.449	56.26	7.276	10.887	8.847	52.07	0.539
08-03-2010 14:48:19	11.349	8.278	-1.584	54.79	9.339	10.988	8.544	55.99	0.598
08-03-2010 14:49:19	10.862	8.749	-1.713	67.62	9.905	10.561	8.748	57.47	0.626
08-03-2010 14:50:19	10.611	9.026	-1.605	82.35	11.117	10.032	9.295	70.39	0.597
08-03-2010 14:51:19	10.874	8.796	-1.713	95.07	10.714	10.263	9.245	92.52	0.602
08-03-2010 14:52:19	11.208	8.492	-1.567	81.15	8.812	10.894	8.835	81.07	0.645
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-03-2010 14:52:19	10.707	8.991	-1.379	89.15	11.322	10.224	9.265	43.98	0.439

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 1 Inlet and Outlet

Test Run 10 End

Final System Bias Check, Run 10 STRATA Version 3.2

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 1 Inlet and Outlet

Reference Cylinder Numbers

Zero	Span
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O2-S	CC92828
CO2-S	CC92828
SO2-S	CC321220
NOx-S	CC331862
CO-S	SG9113307BAL
O2-In	CC92828
CO2-In	CC92828
SO2-In	SG9154119BAL
THC-S	CC103598

Date/Time	08-03-2010		15:03:11		PASSED					
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm	
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	
Zero Cal	-0.005	0.060	0.161	0.73	0.311	0.002	-0.025	0.10	0.039	
Zero Avg	0.022	0.193	-0.808	-0.48	1.443	0.126	-0.024	1.74	0.041	
Zero Bias%	0.1%	0.7%	1.1%	0.3%	1.3%	0.6%	0.0%	0.3%	0.0%	
Zero Drift%	0.0%	0.0%	0.0%	0.0%	1.0%	-0.1%	0.0%	-0.2%	0.5%	
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	
Span Cal	10.003	8.978	49.186	236.52	45.554	10.002	8.955	242.67	10.500	
Span Avg	9.959	9.169	46.694	237.93	44.227	9.978	8.978	236.20	10.675	
Span Bias%	0.2%	1.1%	2.7%	0.3%	1.5%	0.1%	0.1%	1.3%	0.6%	
Span Drift%	0.0%	0.1%	2.0%	0.3%	0.0%	0.0%	0.6%	-0.1%	0.6%	
Ini Zero Avg	0.025	0.188	-0.808	-0.43	0.542	0.146	-0.020	2.56	-0.106	
Ini Span Avg	9.966	9.152	44.847	236.38	44.226	9.986	8.873	236.63	10.504	
Run Avg	10.707	8.991	-1.379	89.15	11.322	10.224	9.265	43.98	0.439	
Co	0.024	0.191	-0.808	-0.46	0.992	0.136	-0.022	2.15	-0.033	
Cm	9.963	9.161	45.770	237.16	44.226	9.982	8.926	236.42	10.590	
Correct Avg	10.742	8.790	-0.597	89.22	10.768	10.239	9.300	43.25	0.470	
System Bias Check End										

Calibration Error Test, Run 1 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

	Reference Cylinder Numbers	Zero	Low-range	Mid-range	High-range
O2-S				CC92828	CC252375
CO2-S				CC92828	CC252375
SO2-S				CC321220	CC61542
NOx-S	FF10803			CC331862	FF747
CO-S		SG9168169BAL	SG9113307BAL		FF7925
O2-In		For All		CC92828	CC252375
CO2-In				CC92828	CC252375
SO2-In				SG9154119BAL	XCO22664B
THC-S			CC103598	FF53852	FF53866

Date/Time	08-04-2010	08:05:35	PASSED							
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm	
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	
Zero Avg	-0.004	0.032	0.438	0.11	0.470	-0.022	-0.022	-0.10	-0.011	
Zero Error%	0.0%	0.2%	0.5%	0.0%	0.5%	0.1%	0.1%	0.0%	0.0%	
Low Ref Cyl										10.590
Low Avg										10.512
Low Error%										0.3%
Mid Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	14.800	
Mid Avg	9.908	8.966	48.078	236.10	45.837	9.939	8.854	242.71	14.827	
Mid Error%	0.4%	0.0%	0.6%	0.1%	0.9%	0.3%	0.6%	0.1%	0.1%	
High Ref Cyl	20.900	18.050	91.630	482.40	89.720	20.900	18.050	490.70	25.210	
High Avg	20.772	17.954	92.255	481.61	88.794	20.882	17.847	489.33	25.285	
High Error%	0.6%	0.5%	0.7%	0.2%	1.0%	0.1%	1.1%	0.3%	0.2%	

Calibration Error Test End

Initial System Bias Check, Run 1 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S		CC92828
CO2-S		CC92828
SO2-S		CC321220
NOx-S		CC331862
CO-S		SG9113307BAL
O2-In		CC92828
CO2-In		CC92828
SO2-In		SG9154119BAL
THC-S		CC103598

Date/Time	08-04-2010	08:25:33	PASSED							
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm	
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	
Zero Cal	-0.004	0.032	0.438	0.11	0.470	-0.022	-0.022	-0.10	-0.011	
Zero Avg	0.011	0.019	0.808	-0.49	0.244	0.143	-0.026	1.32	0.103	
Zero Bias%	0.1%	0.1%	0.4%	0.1%	0.3%	0.8%	0.0%	0.3%	0.4%	
Zero Drift%										
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	
Span Cal	9.908	8.966	48.078	236.10	45.837	9.939	8.854	242.71	10.512	
Span Avg	9.839	8.979	47.339	234.07	46.125	9.848	8.882	230.97	10.566	
Span Bias%	0.3%	0.1%	0.8%	0.4%	0.3%	0.4%	0.2%	2.4%	0.2%	
Span Drift%										
System Bias Check End										

Test Run 1 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-04-2010 08:35:04	11.177	8.263	0.272	86.85	6.378	9.894	9.321	26.60	0.004
08-04-2010 08:36:04	11.727	7.778	0.291	78.01	7.127	10.404	8.990	26.91	-0.080
08-04-2010 08:37:04	11.731	7.734	0.199	61.59	8.066	10.825	8.517	25.96	-0.206
08-04-2010 08:38:04	11.386	8.031	0.210	79.91	9.968	10.396	8.800	27.16	-0.195
08-04-2010 08:39:03	11.112	8.319	0.200	83.35	9.604	10.083	9.059	28.40	-0.274
08-04-2010 08:40:03	11.072	8.444	0.194	66.47	10.415	9.828	9.367	30.82	0.183
08-04-2010 08:41:03	11.064	8.416	0.097	66.80	10.163	10.025	9.281	31.99	0.512
08-04-2010 08:42:03	10.898	8.590	0.107	82.75	11.441	9.792	9.429	33.27	0.648
08-04-2010 08:43:03	11.479	8.042	0.091	92.71	10.346	10.114	9.490	35.63	0.633
08-04-2010 08:44:03	11.376	8.079	0.140	85.24	9.600	10.443	8.838	33.76	0.518
08-04-2010 08:45:03	11.240	8.221	0.134	82.27	10.604	10.220	9.102	36.49	0.518
08-04-2010 08:46:03	10.951	8.456	0.086	93.98	8.723	9.927	9.215	38.32	0.449
08-04-2010 08:47:03	10.984	8.460	0.091	88.55	6.844	9.650	9.474	42.48	0.463
08-04-2010 08:48:03	11.411	8.069	0.102	68.10	5.788	10.286	9.159	44.76	0.434
08-04-2010 08:49:03	11.322	8.094	0.091	71.68	7.585	10.365	8.889	44.44	0.405
08-04-2010 08:50:03	11.301	8.141	-0.016	81.73	7.220	10.238	9.059	45.09	0.375
08-04-2010 08:51:03	11.635	7.877	-0.070	77.63	5.442	10.386	9.053	43.70	0.519
08-04-2010 08:52:03	11.473	7.994	0.070	77.55	7.638	10.690	8.611	42.42	0.499
08-04-2010 08:53:03	11.409	8.093	0.081	86.07	8.245	10.136	9.160	43.71	0.444
08-04-2010 08:54:03	11.871	7.696	-0.091	68.87	6.758	10.812	8.799	43.47	0.455
08-04-2010 08:55:03	11.766	7.740	-0.005	52.13	8.681	10.762	8.600	39.70	0.435
08-04-2010 08:56:03	11.497	8.000	0.021	50.23	14.449	10.593	8.729	39.79	0.435
08-04-2010 08:57:03	11.443	8.121	-0.016	54.90	18.376	10.285	9.057	42.31	0.403
08-04-2010 08:58:03	11.481	8.072	-0.124	73.08	19.344	10.405	9.029	41.43	0.402
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-04-2010 08:58:03	11.367	8.114	0.090	75.44	9.531	10.273	9.043	37.02	0.333

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 2 Inlet and Outlet
 Test Run 1 End

Final System Bias Check, Run 1 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S		CC92828
CO2-S		CC92828
SO2-S		CC321220
NOx-S		CC331862
CO-S		SG9113307BAL
O2-In		CC92828
CO2-In		CC92828
SO2-In		SG9154119BAL
THC-S		CC103598

Date/Time	08-04-2010	09:08:35	PASSED							
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm	
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	
Zero Cal	-0.004	0.032	0.438	0.11	0.470	-0.022	-0.022	-0.10	-0.011	
Zero Avg	0.008	0.008	0.485	-0.47	1.144	0.147	-0.024	1.07	0.053	
Zero Bias%	0.1%	0.1%	0.1%	0.1%	0.8%	0.8%	0.0%	0.2%	0.2%	
Zero Drift%	0.0%	-0.1%	-0.4%	0.0%	1.0%	0.0%	0.0%	-0.1%	-0.2%	
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	
Span Cal	9.908	8.966	48.078	236.10	45.837	9.939	8.854	242.71	10.512	
Span Avg	10.325	8.565	45.031	235.32	43.496	9.758	8.643	225.23	10.517	
Span Bias%	2.0%	2.2%	3.3%	0.2%	2.6%	0.9%	1.2%	3.6%	0.0%	
Span Drift%	2.3%	-2.3%	-2.5%	0.3%	-2.9%	-0.4%	-1.3%	-1.2%	-0.2%	
Ini Zero Avg	0.011	0.019	0.808	-0.49	0.244	0.143	-0.026	1.32	0.103	
Ini Span Avg	9.839	8.979	47.339	234.07	46.125	9.848	8.882	230.97	10.566	
Run Avg	11.367	8.114	0.090	75.44	9.531	10.273	9.043	37.02	0.333	
Co	0.010	0.013	0.646	-0.48	0.694	0.145	-0.025	1.20	0.078	
Cm	10.082	8.772	46.185	234.69	44.811	9.803	8.763	228.10	10.542	
Correct Avg	11.269	8.287	-0.594	76.38	9.029	10.481	9.246	38.25	0.258	

System Bias Check End

Test Run 2 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-04-2010 09:13:31	11.615	7.939	0.129	66.41	10.379	10.442	8.984	41.42	0.211
08-04-2010 09:14:31	11.651	7.877	-0.027	69.43	8.060	10.737	8.706	42.28	0.140
08-04-2010 09:15:31	11.549	7.998	-0.097	69.30	8.592	10.453	8.878	43.35	0.032
08-04-2010 09:16:31	11.197	8.327	-0.081	75.70	10.243	10.407	8.895	44.94	-0.021
08-04-2010 09:17:31	11.392	8.141	-0.075	82.46	10.887	10.054	9.441	48.42	-0.021
08-04-2010 09:18:31	11.716	7.850	-0.129	60.16	12.917	10.647	8.824	46.00	0.068
08-04-2010 09:19:31	11.699	7.832	-0.107	66.06	12.781	10.645	8.712	42.00	0.038
08-04-2010 09:20:31	11.808	7.739	-0.167	69.10	15.632	10.890	8.691	41.00	0.039
08-04-2010 09:21:31	11.661	7.829	-0.161	68.41	14.597	10.653	8.681	38.18	0.031
08-04-2010 09:22:31	11.778	7.778	-0.231	55.54	16.307	10.700	8.792	38.18	0.011
08-04-2010 09:23:31	11.655	7.840	-0.199	54.31	15.567	10.788	8.627	37.32	-0.039
08-04-2010 09:24:31	11.598	7.933	-0.183	78.79	14.030	10.488	8.882	37.52	-0.009
08-04-2010 09:25:31	11.456	8.019	-0.361	90.80	15.516	10.560	8.748	35.28	-0.043
08-04-2010 09:26:31	11.092	8.373	-0.220	93.40	15.273	10.235	9.039	34.46	-0.134
08-04-2010 09:27:31	11.071	8.443	-0.291	80.61	13.890	9.851	9.441	33.68	-0.094
08-04-2010 09:28:31	11.148	8.338	-0.350	62.13	14.175	9.993	9.299	33.54	-0.034
08-04-2010 09:29:31	11.453	8.067	-0.350	66.74	14.536	10.274	9.213	33.50	0.244
08-04-2010 09:30:31	11.790	7.757	-0.344	74.77	13.997	10.716	8.815	30.95	0.289
08-04-2010 09:31:31	11.185	8.278	-0.274	93.55	16.216	10.387	8.694	28.94	0.328
08-04-2010 09:32:31	11.340	8.157	-0.237	117.38	11.911	10.026	9.324	31.67	0.427
08-04-2010 09:33:31	11.584	7.891	-0.414	94.05	7.891	10.710	8.813	30.49	0.373
08-04-2010 09:34:31	11.394	8.055	-0.420	65.77	11.163	10.334	8.875	31.66	0.346
08-04-2010 09:35:31	11.134	8.230	-0.355	67.34	12.721	10.195	8.981	33.82	0.355
08-04-2010 09:36:31	11.222	8.206	-0.382	80.03	15.937	10.017	9.253	33.48	0.245
Run Averages									
	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-04-2010 09:36:31	11.466	8.037	-0.222	75.09	13.051	10.425	8.942	37.17	0.116

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Test Run 2 End

Final System Bias Check, Run 2 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Reference Cylinder Numbers

Zero Span

O2-S CC92828

CO2-S CC92828

SO2-S CC321220

NOx-S CC331862

CO-S SG9113307BAL

O2-In CC92828

CO2-In CC92828

SO2-In SG9154119BAL

THC-S CC103598

Date/Time	08-04-2010	09:48:50	PASSED							
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm	
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	
Zero Cal	-0.004	0.032	0.438	0.11	0.470	-0.022	-0.022	-0.10	-0.011	
Zero Avg	0.015	0.029	0.161	-0.47	-0.154	0.134	-0.024	-0.59	-0.030	
Zero Bias%	0.1%	0.0%	0.3%	0.1%	0.7%	0.7%	0.0%	0.1%	0.1%	
Zero Drift%	0.0%	0.1%	-0.4%	0.0%	-1.4%	-0.1%	0.0%	-0.3%	-0.3%	
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	
Span Cal	9.908	8.966	48.078	236.10	45.837	9.939	8.854	242.71	10.512	
Span Avg	9.886	8.989	44.154	236.13	44.128	9.903	8.934	231.25	10.582	
Span Bias%	0.1%	0.1%	4.3%	0.0%	1.9%	0.2%	0.4%	2.3%	0.2%	
Span Drift%	-2.1%	2.4%	-1.0%	0.2%	0.7%	0.7%	1.6%	1.2%	0.2%	
Ini Zero Avg	0.008	0.008	0.485	-0.47	1.144	0.147	-0.024	1.07	0.053	
Ini Span Avg	10.325	8.565	45.031	235.32	43.496	9.758	8.643	225.23	10.517	
Run Avg	11.466	8.037	-0.222	75.09	13.051	10.425	8.942	37.17	0.116	
Co	0.012	0.018	0.323	-0.47	0.495	0.141	-0.024	0.24	0.011	
Cm	10.106	8.777	44.593	235.72	43.812	9.831	8.789	228.24	10.549	
Correct Avg	11.341	8.203	-0.599	75.69	13.064	10.607	9.116	39.23	0.105	
System Bias Check End										

Test Run 3 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-04-2010 09:52:30	11.185	7.950	0.077	96.46	10.183	9.799	9.243	49.95	0.391
08-04-2010 09:53:30	11.243	7.868	-0.161	85.41	8.503	10.273	8.800	45.19	0.465
08-04-2010 09:54:30	11.412	7.771	-0.167	78.43	8.193	10.323	8.929	45.51	0.555
08-04-2010 09:55:30	11.376	7.816	-0.254	84.72	9.863	10.236	8.822	42.40	0.527
08-04-2010 09:56:30	11.277	7.878	-0.485	81.05	9.264	10.348	8.761	41.11	0.497
08-04-2010 09:57:30	10.702	8.332	-0.474	77.94	10.103	9.841	9.111	45.08	0.468
08-04-2010 09:58:30	11.097	8.016	-0.388	77.60	8.790	9.482	9.545	53.92	0.478
08-04-2010 09:59:30	11.840	7.461	-0.485	61.44	10.720	10.739	8.671	46.33	0.548
08-04-2010 10:00:30	11.191	7.974	-0.452	64.13	14.018	10.505	8.458	39.80	0.496
08-04-2010 10:01:30	10.742	8.377	-0.452	91.28	17.606	9.598	9.382	45.64	0.455
08-04-2010 10:02:30	10.747	8.435	-0.485	109.68	15.152	9.483	9.540	52.98	0.449
08-04-2010 10:03:30	10.835	8.343	-0.522	104.34	12.227	9.758	9.353	54.72	0.450
08-04-2010 10:04:30	11.110	8.136	-0.571	81.74	14.345	9.799	9.405	59.36	0.416
08-04-2010 10:05:30	11.228	7.976	-0.630	65.19	15.325	10.287	9.006	54.36	0.310
08-04-2010 10:06:30	10.992	8.215	-0.511	81.94	15.809	9.842	9.149	53.84	0.263
08-04-2010 10:07:30	11.177	8.080	-0.544	87.98	14.772	10.042	9.216	55.50	0.251
08-04-2010 10:08:30	11.260	7.998	-0.641	78.31	14.487	10.186	9.070	51.91	0.200
08-04-2010 10:09:30	11.188	8.045	-0.646	77.36	13.914	10.139	9.009	50.55	0.351
08-04-2010 10:10:30	11.433	7.894	-0.592	78.59	13.965	10.304	9.093	49.90	0.300
08-04-2010 10:11:30	11.448	7.857	-0.722	81.42	17.407	10.370	8.874	47.07	0.221
08-04-2010 10:12:30	11.571	7.751	-0.695	80.42	18.712	10.635	8.774	45.90	0.224
08-04-2010 10:13:30	11.272	8.001	-0.641	88.66	20.955	10.409	8.836	43.95	0.157
08-04-2010 10:14:30	11.306	7.985	-0.689	89.16	21.690	10.218	9.087	46.72	0.130
08-04-2010 10:15:30	11.061	8.168	-0.598	89.34	21.055	10.028	9.008	46.42	0.097
Run Averages									
	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-04-2010 10:15:30	11.195	8.014	-0.488	83.03	14.044	10.110	9.048	48.68	0.362

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Test Run 3 End

Final System Bias Check, Run 3 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Reference Cylinder Numbers

Zero Span

O2-S	CC92828
CO2-S	CC92828
SO2-S	CC321220
NOx-S	CC331862
CO-S	SG9113307BAL
O2-In	CC92828
CO2-In	CC92828
SO2-In	SG9154119BAL
THC-S	CC103598

Date/Time	08-04-2010		10:26:52		PASSED				
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000
Zero Cal	-0.004	0.032	0.438	0.11	0.470	-0.022	-0.022	-0.10	-0.011
Zero Avg	0.015	0.073	-0.161	-0.44	1.944	0.117	-0.025	2.50	0.232
Zero Bias%	0.1%	0.2%	0.7%	0.1%	1.6%	0.7%	0.0%	0.5%	0.8%
Zero Drift%	0.0%	0.2%	-0.4%	0.0%	2.3%	-0.1%	0.0%	0.6%	0.9%
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590
Span Cal	9.908	8.966	48.078	236.10	45.837	9.939	8.854	242.71	10.512
Span Avg	9.873	9.017	44.062	237.65	43.254	9.902	9.042	231.53	10.455
Span Bias%	0.2%	0.3%	4.4%	0.3%	2.9%	0.2%	1.0%	2.3%	0.2%
Span Drift%	-0.1%	0.2%	-0.1%	0.3%	-1.0%	0.0%	0.6%	0.1%	-0.4%
Ini Zero Avg	0.015	0.029	0.161	-0.47	-0.154	0.134	-0.024	-0.59	-0.030
Ini Span Avg	9.886	8.989	44.154	236.13	44.128	9.903	8.934	231.25	10.582
Run Avg	11.195	8.014	-0.488	83.03	14.044	10.110	9.048	48.68	0.362
Co	0.015	0.051	0.000	-0.46	0.895	0.125	-0.025	0.96	0.101
Cm	9.880	9.003	44.108	236.89	43.691	9.902	8.988	231.39	10.518
Correct Avg	11.327	7.970	-0.539	83.23	13.848	10.206	9.019	50.16	0.265
System Bias Check End									

Test Run 4 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm	
Begin calculating run averages										
08-04-2010 10:30:46	11.626	7.671	1.020	63.52	20.631	6.972	2.692	8.59	0.723	
08-04-2010 10:31:46	11.295	7.992	-0.011	63.86	24.015	9.672	8.671	35.94	0.674	
08-04-2010 10:32:46	11.422	7.934	-0.312	68.33	21.153	10.401	8.982	44.33	0.648	
08-04-2010 10:33:46	11.422	7.956	-0.393	85.16	18.974	10.260	8.981	42.46	0.648	
08-04-2010 10:34:46	11.777	7.679	-0.485	64.72	18.544	10.755	8.806	41.63	0.604	
08-04-2010 10:35:46	11.663	7.754	-0.528	58.32	19.480	10.650	8.665	41.53	0.592	
08-04-2010 10:36:46	11.645	7.769	-0.614	62.59	20.292	10.691	8.767	41.70	0.537	
08-04-2010 10:37:46	11.275	8.062	-0.565	73.32	21.867	10.255	8.879	43.03	0.554	
08-04-2010 10:38:46	11.459	7.969	-0.565	83.78	19.098	10.273	9.198	46.35	0.528	
08-04-2010 10:39:46	11.482	7.944	-0.754	83.02	18.642	10.450	8.918	44.04	0.544	
08-04-2010 10:40:46	11.489	7.960	-0.775	76.99	16.555	10.416	8.978	44.27	0.548	
08-04-2010 10:41:46	12.454	7.028	-0.711	65.82	17.369	10.491	8.958	45.71	0.738	
08-04-2010 10:42:46	15.529	4.484	-0.808	47.95	10.767	10.654	8.761	43.34	0.908	
08-04-2010 10:43:46	14.117	5.819	-0.770	56.97	9.262	10.122	9.103	42.00	0.702	
08-04-2010 10:44:46	11.218	8.197	-0.792	87.14	12.693	10.009	9.291	45.42	0.525	
08-04-2010 10:45:46	11.237	8.188	-0.759	80.07	13.191	10.209	9.210	46.17	0.507	
08-04-2010 10:46:46	10.996	8.417	-0.813	85.32	16.529	9.842	9.372	47.70	0.468	
08-04-2010 10:47:46	11.122	8.311	-0.754	88.57	15.807	10.043	9.375	51.20	0.454	
08-04-2010 10:48:46	10.754	8.662	-0.802	83.29	18.531	9.635	9.400	49.95	0.510	
08-04-2010 10:49:46	11.159	8.285	-0.856	73.40	17.245	9.973	9.621	49.70	0.491	
08-04-2010 10:50:46	11.036	8.364	-0.797	79.75	12.698	9.955	9.315	49.83	0.576	
08-04-2010 10:51:46	11.097	8.365	-0.819	79.43	11.699	9.895	9.470	55.49	0.549	
08-04-2010 10:52:46	11.279	8.217	-0.867	78.13	10.691	10.134	9.289	54.15	0.465	
08-04-2010 10:53:46	11.768	7.782	-0.808	71.91	11.057	10.529	9.112	52.79	0.395	
Run Averages		O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S
	%	%	ppm	ppm	ppm	ppm	%	%	ppm	ppm
08-04-2010 10:53:46	11.680	7.784	-0.596	73.38	16.536	10.093	8.821	44.45	0.579	

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Test Run 4 End

Final System Bias Check, Run 4 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S		CC92828
CO2-S		CC92828
SO2-S		CC321220
NOx-S		CC331862
CO-S		SG9113307BAL
O2-In		CC92828
CO2-In		CC92828
SO2-In		SG9154119BAL
THC-S		CC103598

Date/Time	08-04-2010		11:06:05		PASSED					
Analyte	O2-S	CO2-S	SO2-S	NOX-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm	
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	
Zero Cal	-0.004	0.032	0.438	0.11	0.470	-0.022	-0.022	-0.10	-0.011	
Zero Avg	0.012	0.093	-0.161	-0.53	3.673	0.097	-0.026	1.84	0.104	
Zero Bias%	0.1%	0.3%	0.7%	0.1%	3.6%	0.6%	0.0%	0.4%	0.4%	
Zero Drift%	0.0%	0.1%	0.0%	0.0%	1.9%	-0.1%	0.0%	-0.1%	-0.4%	
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	
Span Cal	9.908	8.966	48.078	236.10	45.837	9.939	8.854	242.71	10.512	
Span Avg	9.890	9.055	46.232	237.12	43.433	9.893	9.047	244.67	10.561	
Span Bias%	0.1%	0.5%	2.0%	0.2%	2.7%	0.2%	1.1%	0.4%	0.2%	
Span Drift%	0.1%	0.2%	2.4%	-0.1%	0.2%	0.0%	0.0%	2.7%	0.4%	
Ini Zero Avg	0.015	0.073	-0.161	-0.44	1.944	0.117	-0.025	2.50	0.232	
Ini Span Avg	9.873	9.017	44.062	237.65	43.254	9.902	9.042	231.53	10.455	
Run Avg	11.680	7.784	-0.596	73.38	16.536	10.093	8.821	44.45	0.579	
Co	0.014	0.083	-0.161	-0.49	2.808	0.107	-0.026	2.17	0.168	
Cm	9.881	9.036	45.147	237.38	43.344	9.898	9.044	238.10	10.508	
Correct Avg	11.816	7.707	-0.467	73.48	15.263	10.194	8.740	43.40	0.420	
System Bias Check End										

Test Run 5 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-04-2010 11:11:17	11.078	8.500	0.543	100.73	4.137	10.149	9.290	63.80	0.305
08-04-2010 11:12:17	11.161	8.463	-0.027	89.87	4.181	9.928	9.559	75.53	0.263
08-04-2010 11:13:17	11.485	8.145	-0.355	67.84	4.749	10.452	9.249	72.02	0.263
08-04-2010 11:14:17	11.671	7.985	-0.511	53.12	7.135	10.620	8.968	76.45	0.252
08-04-2010 11:15:17	11.395	8.165	-0.463	54.38	7.456	10.599	8.856	75.44	0.212
08-04-2010 11:16:17	11.390	8.218	-0.576	74.87	6.938	10.231	9.261	81.52	0.227
08-04-2010 11:17:17	11.179	8.337	-0.641	79.37	6.493	10.277	9.051	73.73	0.245
08-04-2010 11:18:17	11.209	8.298	-0.711	64.06	7.044	10.061	9.366	76.86	0.233
08-04-2010 11:19:17	10.984	8.456	-0.711	62.35	6.436	9.889	9.286	73.56	0.195
08-04-2010 11:20:17	11.057	8.389	-0.808	76.66	5.941	10.001	9.355	77.79	0.201
08-04-2010 11:21:17	11.362	8.112	-0.722	82.68	6.086	10.105	9.298	77.54	0.241
08-04-2010 11:22:17	11.438	8.023	-0.759	78.76	7.293	10.581	8.805	71.65	0.231
08-04-2010 11:23:17	11.186	8.246	-0.781	81.67	8.989	10.113	9.160	72.43	0.168
08-04-2010 11:24:17	11.352	8.132	-0.808	88.07	6.363	10.196	9.180	68.57	0.220
08-04-2010 11:25:17	11.553	7.933	-0.808	75.54	5.557	10.582	8.937	61.93	0.211
08-04-2010 11:26:17	11.244	8.181	-0.775	75.45	7.521	10.208	8.960	62.36	0.173
08-04-2010 11:27:16	11.288	8.111	-0.797	81.99	6.358	10.313	9.078	64.41	0.137
08-04-2010 11:28:16	11.275	8.122	-0.808	80.15	6.722	10.234	9.062	63.63	0.124
08-04-2010 11:29:16	10.920	8.396	-0.727	82.44	6.118	9.934	9.103	60.96	0.106
08-04-2010 11:30:16	11.089	8.245	-0.792	90.88	3.902	9.818	9.439	58.66	0.112
08-04-2010 11:31:16	11.484	7.846	-0.808	77.76	3.599	10.403	9.007	54.36	0.102
08-04-2010 11:32:16	11.483	7.813	-0.797	72.68	4.348	10.395	8.785	52.63	0.132
08-04-2010 11:33:16	11.245	7.953	-0.802	71.64	5.046	10.206	8.827	53.61	0.039
08-04-2010 11:34:16	11.419	7.785	-0.851	78.56	3.194	10.279	8.860	48.51	0.026
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-04-2010 11:34:16	11.289	8.161	-0.636	76.74	5.899	10.232	9.114	67.41	0.184

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Test Run 5 End

Final System Bias Check, Run 5 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Reference Cylinder Numbers

Zero Span

O2-S	CC92828
CO2-S	CC92828
SO2-S	CC321220
NOx-S	CC331862
CO-S	SG9113307BAL
O2-In	CC92828
CO2-In	CC92828
SO2-In	SG9154119BAL
THC-S	CC103598

Date/Time	08-04-2010		11:45:56		PASSED					
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm	
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	
Zero Cal	-0.004	0.032	0.438	0.11	0.470	-0.022	-0.022	-0.10	-0.011	
Zero Avg	0.012	0.130	0.023	-0.53	1.846	0.089	-0.021	2.04	0.185	
Zero Bias%	0.1%	0.5%	0.5%	0.1%	1.5%	0.5%	0.0%	0.4%	0.7%	
Zero Drift%	0.0%	0.2%	0.2%	0.0%	-2.0%	0.0%	0.0%	0.0%	0.3%	
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	
Span Cal	9.908	8.966	48.078	236.10	45.837	9.939	8.854	242.71	10.512	
Span Avg	9.880	9.075	46.370	236.86	44.495	9.883	8.889	231.41	10.539	
Span Bias%	0.1%	0.6%	1.9%	0.2%	1.5%	0.3%	0.2%	2.3%	0.1%	
Span Drift%	0.0%	0.1%	0.2%	-0.1%	1.2%	-0.1%	-0.9%	-2.7%	-0.1%	
Ini Zero Avg	0.012	0.093	-0.161	-0.53	3.673	0.097	-0.026	1.84	0.104	
Ini Span Avg	9.890	9.055	46.232	237.12	43.433	9.893	9.047	244.67	10.561	
Run Avg	11.289	8.161	-0.636	76.74	5.899	10.232	9.114	67.41	0.184	
Co	0.012	0.112	-0.069	-0.53	2.759	0.093	-0.023	1.94	0.145	
Cm	9.885	9.065	46.301	236.99	43.964	9.888	8.968	238.04	10.550	
Correct Avg	11.416	8.055	-0.595	76.98	3.434	10.345	9.106	67.16	0.040	
System Bias Check End										

Test Run 6 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-04-2010 11:52:01	12.054	7.370	-0.032	79.59	15.366	10.843	8.444	20.25	0.261
08-04-2010 11:53:01	11.934	7.456	-0.350	92.18	20.095	10.927	8.241	18.37	0.277
08-04-2010 11:54:01	11.795	7.593	-0.409	92.36	28.050	10.906	8.336	19.48	0.237
08-04-2010 11:55:01	11.860	7.586	-0.506	83.41	21.045	10.838	8.578	25.07	0.205
08-04-2010 11:56:01	11.628	7.736	-0.485	79.24	21.412	10.675	8.472	32.15	0.158
08-04-2010 11:57:01	11.677	7.726	-0.652	87.68	21.212	10.664	8.660	53.97	0.198
08-04-2010 11:58:01	11.648	7.734	-0.700	78.19	20.429	10.675	8.639	65.44	0.178
08-04-2010 11:59:01	11.654	7.758	-0.641	76.05	20.094	10.493	8.750	50.15	0.156
08-04-2010 12:00:01	11.778	7.658	-0.700	79.44	24.117	10.801	8.575	37.28	0.192
08-04-2010 12:01:01	11.863	7.578	-0.657	86.37	16.933	10.996	8.447	35.53	0.199
08-04-2010 12:02:01	11.504	7.817	-0.571	77.73	17.806	10.672	8.460	39.10	0.174
08-04-2010 12:03:01	11.345	7.964	-0.775	68.56	18.737	10.302	8.816	42.53	0.184
08-04-2010 12:04:01	11.653	7.761	-0.786	76.93	18.235	10.530	8.834	49.50	0.193
08-04-2010 12:05:01	11.684	7.674	-0.625	85.23	17.725	10.929	8.429	43.58	0.202
08-04-2010 12:06:01	11.248	8.025	-0.592	103.23	20.722	10.283	8.693	40.98	0.170
08-04-2010 12:07:01	11.088	8.186	-0.722	100.81	16.073	10.116	9.002	43.27	0.202
08-04-2010 12:08:01	10.863	8.450	-0.759	77.84	17.853	9.724	9.255	45.09	0.234
08-04-2010 12:09:01	10.809	8.513	-0.635	68.31	14.866	9.859	9.330	48.42	0.131
08-04-2010 12:10:01	10.279	9.041	-0.732	92.90	14.888	8.995	9.775	51.03	0.058
08-04-2010 12:11:01	11.235	8.190	-0.619	94.81	12.147	9.818	9.849	54.76	0.071
08-04-2010 12:12:01	11.476	7.972	-0.619	86.63	13.563	10.352	9.017	45.51	0.032
08-04-2010 12:13:01	11.596	7.868	-0.711	77.88	14.455	10.570	8.896	44.96	0.025
08-04-2010 12:14:01	10.984	8.408	-0.786	69.43	13.479	10.035	8.991	45.45	0.164
08-04-2010 12:15:01	10.248	9.147	-0.652	79.92	10.167	9.088	9.738	53.07	0.219
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-04-2010 12:15:01	11.413	7.967	-0.613	83.11	17.895	10.379	8.843	41.87	0.172

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Test Run 6 End

Final System Bias Check, Run 6 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S		CC92828
CO2-S		CC92828
SO2-S		CC321220
NOx-S		CC331862
CO-S		SG9113307BAL
O2-In		CC92828
CO2-In		CC92828
SO2-In		SG9154119BAL
THC-S		CC103598

Date/Time	08-04-2010		12:25:33		PASSED								
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S				
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm				
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	0.00	-0.022	-0.10	-0.011
Zero Cal	-0.004	0.032	0.438	0.11	0.470	-0.022	-0.022	-0.022	-0.022	-0.10	-0.011	-0.011	-0.011
Zero Avg	0.021	0.156	0.161	-0.51	1.175	0.081	-0.024	1.77	-0.024	1.77	-0.061	-0.061	-0.061
Zero Bias%	0.1%	0.7%	0.3%	0.1%	0.8%	0.5%	0.0%	0.4%	0.0%	0.4%	0.2%	0.2%	0.2%
Zero Drift%	0.0%	0.1%	0.2%	0.0%	-0.7%	0.0%	0.0%	-0.1%	0.0%	-0.1%	-0.8%	-0.8%	-0.8%
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	242.20	10.590	10.590	10.590
Span Cal	9.908	8.966	48.078	236.10	45.837	9.939	8.854	242.71	10.512	242.71	10.512	10.512	10.512
Span Avg	9.866	9.087	44.154	235.81	43.539	9.875	8.720	227.53	10.562	227.53	10.562	10.562	10.562
Span Bias%	0.2%	0.7%	4.3%	0.1%	2.6%	0.3%	0.7%	3.1%	0.2%	3.1%	0.2%	0.2%	0.2%
Span Drift%	-0.1%	0.1%	-2.4%	-0.2%	-1.1%	0.0%	-0.9%	-0.8%	0.1%	-0.8%	0.1%	0.111	0.111
Ini Zero Avg	0.012	0.130	0.023	-0.53	1.846	0.089	-0.021	2.04	0.185	2.04	0.185	0.185	0.185
Ini Span Avg	9.880	9.075	46.370	236.86	44.495	9.883	8.889	231.41	10.539	231.41	10.539	10.539	10.539
Run Avg	11.413	7.967	-0.613	83.11	17.895	10.379	8.843	41.87	0.172	41.87	0.172	0.172	0.172
Co	0.016	0.143	0.092	-0.52	1.511	0.085	-0.023	1.91	0.062	1.91	0.062	0.062	0.062
Cm	9.873	9.081	45.262	236.33	44.017	9.879	8.804	229.47	10.551	229.47	10.551	10.551	10.551
Correct Avg	11.555	7.844	-0.760	83.54	17.372	10.504	8.999	42.54	0.111	42.54	0.111	0.111	0.111
System Bias Check End													

Test Run 7 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-04-2010 12:28:42	11.217	8.114	0.267	78.03	13.436	9.905	8.783	49.09	0.279
08-04-2010 12:29:42	10.905	8.420	-0.043	77.65	11.402	9.894	9.113	52.84	0.262
08-04-2010 12:30:42	11.229	8.172	-0.183	73.56	10.265	10.058	9.344	50.68	0.361
08-04-2010 12:31:41	11.347	8.037	-0.320	66.58	12.673	10.387	8.928	48.18	0.333
08-04-2010 12:32:41	11.190	8.151	-0.274	73.72	13.288	10.278	8.927	44.91	0.344
08-04-2010 12:33:41	10.705	8.630	-0.393	94.80	12.525	9.743	9.211	47.12	0.433
08-04-2010 12:34:41	10.900	8.485	-0.468	100.20	11.790	9.642	9.624	52.41	0.412
08-04-2010 12:35:41	11.132	8.260	-0.398	78.56	12.044	9.993	9.285	49.13	0.367
08-04-2010 12:36:41	11.529	7.898	-0.485	55.06	13.946	10.509	9.040	48.46	0.391
08-04-2010 12:37:41	11.207	8.193	-0.420	71.26	16.774	10.227	8.845	50.20	0.432
08-04-2010 12:38:42	11.540	7.949	-0.506	77.43	14.919	10.448	9.056	52.98	0.437
08-04-2010 12:39:42	11.533	7.917	-0.485	63.98	17.323	10.536	8.777	51.63	0.395
08-04-2010 12:40:42	11.547	7.891	-0.485	57.13	17.914	10.589	8.832	53.18	0.409
08-04-2010 12:41:42	11.629	7.830	-0.522	61.29	17.739	10.592	8.818	53.14	0.429
08-04-2010 12:42:42	11.482	7.926	-0.511	62.43	18.955	10.540	8.740	49.71	0.422
08-04-2010 12:43:42	11.669	7.784	-0.490	59.03	19.238	10.580	8.842	47.89	0.361
08-04-2010 12:44:42	11.720	7.680	-0.544	52.67	17.848	10.832	8.535	42.51	0.321
08-04-2010 12:45:42	11.489	7.895	-0.501	61.01	19.982	10.528	8.693	43.81	0.330
08-04-2010 12:46:42	11.713	7.753	-0.511	57.29	23.313	10.715	8.801	44.23	0.371
08-04-2010 12:47:42	11.572	7.831	-0.641	71.44	21.832	10.585	8.671	38.54	0.405
08-04-2010 12:48:42	11.515	7.881	-0.528	87.77	17.425	10.627	8.697	36.67	0.378
08-04-2010 12:49:42	11.552	7.868	-0.522	86.10	18.619	10.461	8.895	36.66	0.334
08-04-2010 12:50:42	11.261	8.092	-0.576	90.19	17.902	10.285	8.828	34.64	0.412
08-04-2010 12:51:42	11.238	8.110	-0.608	85.15	13.384	10.302	9.024	33.65	0.417
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-04-2010 12:51:42	11.367	8.032	-0.422	72.61	16.023	10.344	8.929	46.35	0.376

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 2 Inlet and Outlet
 Test Run 7 End

Final System Bias Check, Run 7 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S		CC92828
CO2-S		CC92828
SO2-S		CC321220
NOx-S		CC331862
CO-S		SG9113307BAL
O2-In		CC92828
CO2-In		CC92828
SO2-In		SG9154119BAL
THC-S		CC103598

Date/Time	08-04-2010	13:02:02	PASSED	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S
Analyte				%	%	ppm	ppm	ppm	%	%	ppm	ppm
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.000
Zero Cal	-0.004	0.032	0.438	0.11	0.470	45.070	236.60	236.10	-0.022	-0.022	-0.10	-0.011
Zero Avg	0.016	0.174	0.069	-0.47	2.843	9.994	8.960	9.939	-0.024	0.082	0.89	0.113
Zero Bias%	0.1%	0.8%	0.4%	0.1%	2.6%	0.5%	0.5%	0.5%	0.0%	0.0%	0.2%	0.4%
Zero Drift%	0.0%	0.1%	-0.1%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	0.6%
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	9.939	242.20	242.20	242.20	10.590
Span Cal	9.908	8.966	48.078	236.10	45.837	8.854	8.854	8.854	242.71	242.71	242.71	10.512
Span Avg	9.850	9.092	43.555	234.46	44.624	9.871	8.872	8.872	225.05	225.05	225.05	10.526
Span Bias%	0.3%	0.7%	4.9%	0.3%	1.4%	0.3%	0.3%	0.3%	0.1%	0.1%	3.6%	0.0%
Span Drift%	-0.1%	0.0%	-0.7%	-0.3%	1.2%	0.0%	0.0%	0.0%	0.8%	0.8%	-0.5%	-0.1%
Ini Zero Avg	0.021	0.156	0.161	-0.51	1.175	0.081	-0.024	1.175	-0.024	1.77	-0.061	
Ini Span Avg	9.866	9.087	44.154	235.81	43.539	9.875	8.720	9.875	227.53	227.53	227.53	10.562
Run Avg	11.367	8.032	-0.422	72.61	16.023	10.344	8.929	8.929	46.35	46.35	46.35	0.376
Co	0.019	0.165	0.115	-0.49	2.009	0.082	-0.024	2.009	-0.024	1.33	1.33	0.026
Cm	9.858	9.089	43.855	235.13	44.081	9.873	8.796	8.796	226.29	226.29	226.29	10.544
Correct Avg	11.527	7.898	-0.598	73.40	15.012	10.475	9.095	9.095	48.47	48.47	48.47	0.353
System Bias Check End												

Test Run 8 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-04-2010 13:13:01	11.789	7.744	-0.307	97.74	17.573	10.555	8.922	44.43	0.244
08-04-2010 13:14:01	12.025	7.524	-0.458	93.25	17.387	11.128	8.416	42.72	0.255
08-04-2010 13:15:01	11.735	7.759	-0.474	82.78	20.728	10.862	8.420	42.44	0.187
08-04-2010 13:16:01	11.836	7.706	-0.458	70.88	22.397	10.815	8.723	47.11	0.159
08-04-2010 13:17:01	11.668	7.799	-0.258	76.64	23.874	10.767	8.575	46.27	0.161
08-04-2010 13:18:01	11.060	8.369	-0.490	63.19	25.118	10.231	8.835	51.34	0.177
08-04-2010 13:19:01	10.863	8.577	-0.485	66.25	19.988	9.773	9.475	55.82	0.110
08-04-2010 13:20:01	11.059	8.397	-0.479	88.35	14.755	9.862	9.503	49.48	0.054
08-04-2010 13:21:01	11.086	8.349	-0.463	97.84	10.785	10.061	9.192	46.71	0.176
08-04-2010 13:22:01	11.333	8.161	-0.511	93.68	13.425	10.276	9.239	47.09	0.139
08-04-2010 13:23:01	11.385	8.087	-0.479	99.10	12.810	10.409	8.968	43.02	0.173
08-04-2010 13:24:01	11.504	7.987	-0.452	94.42	12.409	10.449	8.966	42.45	0.184
08-04-2010 13:25:01	11.129	8.303	-0.479	87.64	15.521	10.317	8.839	38.87	0.202
08-04-2010 13:26:01	11.257	8.203	-0.485	87.73	11.832	10.157	9.300	40.18	0.187
08-04-2010 13:27:01	10.956	8.483	-0.404	107.69	11.302	9.998	9.145	37.13	0.182
08-04-2010 13:28:01	11.674	7.849	-0.592	93.84	14.271	10.306	9.403	37.50	0.124
08-04-2010 13:29:01	11.664	7.805	-0.581	79.04	10.967	10.880	8.489	30.29	0.158
08-04-2010 13:30:01	10.762	8.649	-0.501	89.97	14.676	9.942	8.992	31.24	0.139
08-04-2010 13:31:01	10.969	8.487	-0.555	93.79	9.161	9.541	9.748	36.59	0.147
08-04-2010 13:32:01	11.729	7.766	-0.581	66.79	7.091	10.643	9.105	32.76	0.144
08-04-2010 13:33:01	11.569	7.873	-0.581	70.94	9.252	10.623	8.631	29.29	0.088
08-04-2010 13:34:01	12.731	6.853	-0.506	74.45	8.198	10.707	8.794	30.20	0.213
08-04-2010 13:35:01	12.309	7.316	-0.560	57.21	8.600	10.378	8.744	32.12	0.214
08-04-2010 13:36:01	13.409	6.354	-0.555	59.65	8.645	10.150	9.308	36.51	0.297
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-04-2010 13:36:01	11.563	7.933	-0.487	83.04	14.198	10.368	8.989	40.48	0.171

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Test Run 8 End

Final System Bias Check, Run 8 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Reference Cylinder Numbers	
Zero	Span

O2-S	CC92828
CO2-S	CC92828
SO2-S	CC321220
NOx-S	CC331862
CO-S	SG9113307BAL
O2-In	CC92828
CO2-In	CC92828
SO2-In	SG9154119BAL
THC-S	CC103598

Date/Time	08-04-2010		13:46:39		PASSED								
Analyte	O2-S	CO2-S	SO2-S	NOX-S	CO-S	O2-In	CO2-In	SO2-In	THC-S				
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm				
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	0.00	0.00	0.000	0.000
Zero Cal	-0.004	0.032	0.438	0.11	0.470	-0.022	-0.022	-0.10	-0.10	-0.011	-0.011	-0.011	-0.011
Zero Avg	0.017	0.143	0.161	-0.52	3.043	0.078	-0.017	1.23	0.068	0.068	0.068	0.068	0.068
Zero Bias%	0.1%	0.6%	0.3%	0.1%	2.9%	0.5%	0.0%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Zero Drift%	0.0%	-0.2%	0.1%	0.0%	0.2%	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590				
Span Cal	9.908	8.966	48.078	236.10	45.837	9.939	8.854	242.71	10.512				
Span Avg	9.871	9.056	44.709	235.35	44.523	9.864	8.797	228.28	10.416				
Span Bias%	0.2%	0.5%	3.7%	0.2%	1.5%	0.4%	0.3%	2.9%	0.3%	0.3%	0.3%	0.3%	0.3%
Span Drift%	0.1%	-0.2%	1.3%	0.2%	-0.1%	0.0%	-0.4%	0.7%	0.7%	-0.4%	-0.4%	-0.4%	-0.4%
Ini Zero Avg	0.016	0.174	0.069	-0.47	2.843	0.082	-0.024	0.89	0.113				
Ini Span Avg	9.850	9.092	43.555	234.46	44.624	9.871	8.872	225.05	10.526				
Run Avg	11.563	7.933	-0.487	83.04	14.198	10.368	8.989	40.48	0.171				
Co	0.017	0.159	0.115	-0.49	2.943	0.080	-0.020	1.06	0.091				
Cm	9.860	9.074	44.132	234.90	44.573	9.867	8.834	226.66	10.471				
Correct Avg	11.722	7.814	-0.666	83.96	12.185	10.505	9.116	42.32	0.082				
System Bias Check End													

Test Run 9 STRATA Version 3.2									
	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-04-2010 13:50:04	11.169	8.290	0.463	77.52	11.910	9.726	9.153	60.24	0.136
08-04-2010 13:51:03	10.998	8.442	0.167	99.13	12.617	9.816	9.256	70.21	0.164
08-04-2010 13:52:03	11.838	7.702	-0.097	88.38	12.430	10.697	9.123	66.33	0.455
08-04-2010 13:53:03	11.568	7.903	-0.150	77.01	12.919	10.699	8.580	52.51	0.475
08-04-2010 13:54:03	10.866	8.569	-0.183	68.96	15.097	9.994	9.034	56.48	0.435
08-04-2010 13:55:03	10.803	8.637	-0.215	69.71	13.887	9.726	9.575	60.18	0.415
08-04-2010 13:56:03	10.855	8.623	-0.296	100.33	12.056	9.707	9.637	55.34	0.441
08-04-2010 13:57:03	11.127	8.354	-0.431	112.91	10.932	10.007	9.411	51.55	0.492
08-04-2010 13:58:03	10.876	8.547	-0.458	90.21	12.060	10.127	9.150	49.17	0.464
08-04-2010 13:59:03	10.381	9.014	-0.479	91.96	10.438	9.290	9.700	52.04	0.399
08-04-2010 14:00:03	11.121	8.350	-0.452	85.46	9.887	9.840	9.825	49.33	0.391
08-04-2010 14:01:03	11.227	8.251	-0.414	74.09	11.129	10.192	9.139	40.30	0.364
08-04-2010 14:02:03	11.514	8.033	-0.490	61.91	13.967	10.492	9.095	38.75	0.355
08-04-2010 14:03:03	11.557	7.951	-0.458	63.13	13.760	10.653	8.858	36.28	0.317
08-04-2010 14:04:03	11.219	8.235	-0.501	85.09	14.677	10.294	8.972	35.95	0.318
08-04-2010 14:05:03	10.771	8.654	-0.501	95.54	13.498	9.875	9.271	37.02	0.332
08-04-2010 14:06:03	10.683	8.745	-0.501	103.34	11.969	9.616	9.607	40.69	0.345
08-04-2010 14:07:03	10.751	8.685	-0.479	92.96	11.472	9.548	9.667	39.54	0.328
08-04-2010 14:08:03	11.311	8.173	-0.592	73.02	10.746	10.211	9.406	38.23	0.379
08-04-2010 14:09:03	11.118	8.286	-0.474	76.79	11.863	10.217	9.040	35.16	0.428
08-04-2010 14:10:03	11.040	8.368	-0.630	73.12	11.346	10.024	9.284	36.99	0.433
08-04-2010 14:11:03	11.263	8.148	-0.501	62.22	10.588	10.107	9.230	35.63	0.424
08-04-2010 14:12:03	11.310	8.051	-0.565	65.75	8.476	10.386	8.949	33.00	0.376
08-04-2010 14:13:03	11.244	8.148	-0.581	74.15	7.859	10.181	9.057	33.09	0.391
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-04-2010 14:13:03	11.109	8.340	-0.367	81.76	11.899	10.059	9.251	45.99	0.377

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 2 Inlet and Outlet
 Test Run 9 End

Final System Bias Check, Run 9 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S		CC92828
CO2-S		CC92828
SO2-S		CC321220
NOx-S		CC331862
CO-S		SG9113307BAL
O2-In		CC92828
CO2-In		CC92828
SO2-In		SG9154119BAL
THC-S		CC103598

Date/Time	08-04-2010	14:24:00	PASSED	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S
Analyte				%	%	ppm	ppm	ppm	%	%	ppm	ppm
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.000
Zero Cal	-0.004	0.032	0.438	0.11	0.470	3.687	0.085	-0.022	-0.022	-0.025	-0.10	-0.011
Zero Avg	0.012	0.150	0.162	-0.51	3.687	0.085	-0.025	0.56	0.56	0.56	0.56	0.030
Zero Bias%	0.1%	0.6%	0.3%	0.1%	3.6%	0.5%	0.0%	0.1%	0.0%	0.1%	0.1%	0.1%
Zero Drift%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	242.20	242.20	10.590	10.590
Span Cal	9.908	8.966	48.078	236.10	45.837	9.939	8.854	242.71	242.71	242.71	10.512	10.512
Span Avg	9.847	9.071	43.878	234.52	45.125	9.860	8.864	226.47	226.47	226.47	10.518	10.518
Span Bias%	0.3%	0.6%	4.6%	0.3%	0.8%	0.4%	0.1%	3.3%	3.3%	0.1%	0.0%	0.0%
Span Drift%	-0.1%	0.1%	-0.9%	-0.2%	0.7%	0.0%	0.4%	-0.4%	-0.4%	0.4%	0.3%	0.3%
Ini Zero Avg	0.017	0.143	0.161	-0.52	3.043	0.078	-0.017	1.23	1.23	1.23	0.068	0.068
Ini Span Avg	9.871	9.056	44.709	235.35	44.523	9.864	8.797	228.28	228.28	228.28	10.416	10.416
Run Avg	11.109	8.340	-0.367	81.76	11.899	10.059	9.251	45.99	45.99	45.99	0.377	0.377
Co	0.015	0.146	0.161	-0.51	3.365	0.081	-0.021	0.90	0.90	0.90	0.049	0.049
Cm	9.859	9.063	44.293	234.93	44.824	9.862	8.830	227.38	227.38	227.38	10.467	10.467
Correct Avg	11.263	8.233	-0.583	82.68	9.277	10.196	9.385	48.23	48.23	48.23	0.334	0.334
System Bias Check End												

Test Run 10 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-04-2010 14:27:14	11.255	8.112	0.592	84.67	13.253	10.105	8.628	20.34	0.404
08-04-2010 14:28:14	11.426	8.017	0.220	80.88	14.611	10.116	9.186	24.81	0.362
08-04-2010 14:29:14	11.816	7.675	-0.005	67.41	12.060	10.888	8.701	21.92	0.298
08-04-2010 14:30:14	11.641	7.804	-0.097	68.82	14.730	10.640	8.608	21.47	0.274
08-04-2010 14:31:14	11.913	7.618	-0.161	67.55	19.809	10.925	8.621	21.05	0.245
08-04-2010 14:32:14	11.414	7.996	-0.226	77.19	15.226	10.617	8.512	20.72	0.259
08-04-2010 14:33:14	10.938	8.412	-0.264	83.86	14.308	10.065	9.093	24.65	0.363
08-04-2010 14:34:14	10.571	8.745	-0.307	83.72	12.702	9.548	9.488	30.56	0.317
08-04-2010 14:35:14	11.046	8.327	-0.355	94.24	11.115	9.786	9.635	30.78	0.328
08-04-2010 14:36:14	11.142	8.215	-0.431	101.36	12.012	10.298	9.025	27.80	0.339
08-04-2010 14:37:14	10.816	8.567	-0.210	110.89	13.158	9.805	9.281	30.72	0.313
08-04-2010 14:38:14	10.785	8.603	-0.247	96.28	12.201	9.786	9.448	35.46	0.329
08-04-2010 14:39:14	10.785	8.602	-0.398	77.44	14.335	9.669	9.538	35.51	0.308
08-04-2010 14:40:14	10.992	8.385	-0.485	61.27	14.027	9.712	9.467	36.34	0.330
08-04-2010 14:41:14	11.227	8.181	-0.404	54.93	12.754	10.502	9.076	30.67	0.272
08-04-2010 14:42:14	10.919	8.442	-0.485	93.17	13.160	9.581	9.348	34.36	0.288
08-04-2010 14:43:14	11.389	7.992	-0.447	90.27	11.067	10.560	9.085	32.16	0.286
08-04-2010 14:44:14	11.092	8.260	-0.479	86.35	10.766	10.107	9.029	31.52	0.283
08-04-2010 14:45:14	10.879	8.456	-0.425	83.49	9.623	9.870	9.221	33.08	0.225
08-04-2010 14:46:14	11.094	8.278	-0.468	83.34	9.688	10.006	9.342	38.01	0.257
08-04-2010 14:47:14	10.816	8.457	-0.485	94.71	9.927	9.872	9.172	35.13	0.289
08-04-2010 14:48:14	11.427	7.935	-0.485	92.17	7.119	10.100	9.357	35.74	0.266
08-04-2010 14:49:14	11.646	7.739	-0.344	62.93	7.520	10.796	8.598	30.56	0.256
08-04-2010 14:50:14	11.157	8.157	-0.431	73.33	9.977	10.266	8.732	33.21	0.243
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-04-2010 14:50:14	11.174	8.207	-0.284	82.09	12.298	10.151	9.091	29.86	0.297

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Test Run 10 End

Final System Bias Check, Run 10 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 2 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S		CC92828
CO2-S		CC92828
SO2-S		CC321220
NOx-S		CC331862
CO-S		SG9113307BAL
O2-In		CC92828
CO2-In		CC92828
SO2-In		SG9154119BAL
THC-S		CC103598

Date/Time	PASSED									
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm	
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	
Zero Cal	-0.004	0.032	0.438	0.11	0.470	-0.022	-0.022	-0.10	-0.011	
Zero Avg	0.011	0.175	0.808	-0.50	1.670	0.077	-0.025	0.14	-0.175	
Zero Bias%	0.1%	0.8%	0.4%	0.1%	1.3%	0.5%	0.0%	0.0%	0.5%	
Zero Drift%	0.0%	0.1%	0.7%	0.0%	-2.2%	0.0%	0.0%	-0.1%	-0.7%	
Span Ref Cyl	9.994	8.960	48.660	236.60	45.070	9.994	8.960	242.20	10.590	
Span Cal	9.908	8.966	48.078	236.10	45.837	9.939	8.854	242.71	10.512	
Span Avg	9.821	9.085	44.016	233.59	45.325	9.851	8.905	226.99	10.501	
Span Bias%	0.4%	0.7%	4.4%	0.5%	0.6%	0.4%	0.3%	3.2%	0.0%	
Span Drift%	-0.1%	0.1%	0.2%	-0.2%	0.2%	0.0%	0.2%	0.1%	-0.1%	
Ini Zero Avg	0.012	0.150	0.162	-0.51	3.687	0.085	-0.025	0.56	0.030	
Ini Span Avg	9.847	9.071	43.878	234.52	45.125	9.860	8.864	226.47	10.518	
Run Avg	11.174	8.207	-0.284	82.09	12.298	10.151	9.091	29.86	0.297	
Co	0.011	0.162	0.485	-0.50	2.679	0.081	-0.025	0.35	-0.073	
Cm	9.834	9.078	43.947	234.05	45.225	9.855	8.884	226.73	10.509	
Correct Avg	11.358	8.085	-0.861	83.32	10.190	10.296	9.168	31.57	0.370	
System Bias Check End										

Calibration Error Test, Run 1, STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 3 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Low-range	Mid-range	High-range
O2-S			CC332317	CC252375
CO2-S			CC332317	CC252375
SO2-S			CC321220	CC61542
NOx-S	FF10803		CC331862	FF747
CO-S	SG9168169BAL		SG9113307BAL	FF7925
O2-In			CC332317	CC252375
CO2-In			CC332317	CC252375
SO2-In			SG9154119BAL	XC022664B
THC-S		CC103598	FF53852	FF53866

Date/Time	08-06-2010	06:59:03	PASSED						
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000
Zero Avg	-0.014	0.022	0.161	1.25	0.846	-0.033	-0.026	0.23	0.005
Zero Error%	0.1%	0.1%	0.2%	0.3%	0.9%	0.2%	0.1%	0.0%	0.0%
Low Ref Cyl									10.590
Low Avg									10.629
Low Error%									0.1%
Mid Ref Cyl	9.988	9.031	48.660	236.60	45.070	9.988	9.031	242.20	14.800
Mid Avg	9.970	8.959	48.633	236.38	45.125	9.987	8.910	242.22	14.872
Mid Error%	0.1%	0.4%	0.0%	0.0%	0.1%	0.0%	0.7%	0.0%	0.2%
High Ref Cyl	20.900	18.050	91.630	482.40	89.720	20.900	18.050	490.70	25.210
High Avg	20.883	17.790	92.255	478.69	91.513	21.024	17.730	499.52	25.239
High Error%	0.1%	1.4%	0.7%	0.8%	2.0%	0.6%	1.8%	1.8%	0.1%

Calibration Error Test End

Initial System Bias Check, Run 1 STRATA Version 3.2
Operator: Bill Harris
Plant Name: Huntington RRF
Location: Unit 3 Inlet and Outlet

Reference Cylinder Numbers
Zero Span
O2-S CC332317
CO2-S CC332317
SO2-S CC321220
NOx-S CC331862
CO-S SG9113307BAL
O2-In CC332317
CO2-In CC332317
SO2-In SG9154119BAL
THC-S CC103598

Date/Time	08-06-2010	07:18:22	PASSED							
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm	
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	
Zero Cal	-0.014	0.022	0.161	1.25	0.846	-0.033	-0.026	0.23	0.005	
Zero Avg	-0.027	0.060	0.438	-0.39	0.358	0.328	-0.025	1.28	-0.105	
Zero Bias%	0.1%	0.2%	0.3%	0.3%	0.5%	1.7%	0.0%	0.2%	0.4%	
Zero Drift%										
Span Ref Cyl	9.988	9.031	48.660	236.60	45.070	9.988	9.031	242.20	10.590	
Span Cal	9.970	8.959	48.633	236.38	45.125	9.987	8.910	242.22	10.629	
Span Avg	9.837	8.947	47.894	240.33	45.224	10.167	8.889	231.04	10.724	
Span Bias%	0.6%	0.1%	0.8%	0.8%	0.1%	0.9%	0.1%	2.3%	0.3%	
Span Drift%										

System Bias Check End

Test Run 1 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-06-2010 07:30:05	11.047	8.338	0.198	86.01	25.522	10.704	8.817	103.40	0.138
08-06-2010 07:31:05	10.923	8.473	0.258	95.64	24.871	10.545	8.989	85.03	-0.009
08-06-2010 07:32:05	11.024	8.392	0.161	93.80	21.729	10.639	9.043	78.10	0.708
08-06-2010 07:33:05	11.439	8.011	0.161	113.02	18.006	11.052	8.810	72.68	0.668
08-06-2010 07:34:05	11.080	8.304	0.150	99.95	20.528	10.876	8.611	68.61	0.328
08-06-2010 07:35:05	10.861	8.533	0.177	86.46	21.987	10.533	9.053	75.02	0.254
08-06-2010 07:36:05	10.956	8.451	0.150	81.38	23.212	10.557	9.098	74.84	0.255
08-06-2010 07:37:05	11.302	8.087	0.140	89.73	24.636	11.050	8.861	73.56	0.213
08-06-2010 07:38:05	11.298	8.125	0.134	96.46	33.265	10.956	8.794	69.40	0.138
08-06-2010 07:39:05	11.096	8.249	0.161	80.07	21.986	10.907	8.667	69.09	-0.016
08-06-2010 07:40:04	11.023	8.360	0.112	75.64	24.239	10.678	8.954	75.40	0.124
08-06-2010 07:41:04	11.429	8.020	0.027	77.80	21.322	11.101	8.799	77.22	-0.125
08-06-2010 07:42:04	11.170	8.182	0.156	87.97	21.076	11.008	8.537	74.63	0.201
08-06-2010 07:43:04	11.046	8.353	0.086	92.01	18.290	10.690	8.919	83.86	0.205
08-06-2010 07:44:04	10.890	8.497	0.075	93.59	16.636	10.603	8.947	84.21	0.084
08-06-2010 07:45:04	11.316	8.160	-0.021	78.46	14.552	10.909	8.998	77.43	0.122
08-06-2010 07:46:04	11.291	8.125	0.032	69.18	17.349	11.070	8.599	75.85	0.127
08-06-2010 07:47:04	11.321	8.151	0.048	79.54	21.899	10.929	8.865	78.06	0.336
08-06-2010 07:48:04	11.403	8.023	-0.016	76.22	18.564	11.116	8.649	75.86	0.591
08-06-2010 07:49:04	11.272	8.118	-0.011	73.32	20.757	11.026	8.692	77.61	0.312
08-06-2010 07:50:04	10.901	8.476	-0.118	73.89	26.241	10.578	8.916	81.09	0.400
08-06-2010 07:51:04	11.063	8.397	0.086	80.43	22.107	10.706	9.048	83.33	0.305
08-06-2010 07:52:04	11.211	8.224	-0.038	84.51	17.297	10.924	8.834	79.83	0.401
08-06-2010 07:53:04	11.300	8.132	-0.140	73.35	17.562	10.910	8.770	79.91	0.266
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-06-2010 07:53:04	11.153	8.258	0.082	84.94	21.402	10.836	8.845	78.10	0.251

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 3 Inlet and Outlet
 Test Run 1 End

Final System Bias Check, Run 1 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 3 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S	CC332317	
CO2-S	CC332317	
SO2-S	CC321220	
NOx-S	CC331862	
CO-S	SG9113307BAL	
O2-In	CC332317	
CO2-In	CC332317	
SO2-In	SG9154119BAL	
THC-S	CC103598	

Date/Time	08-06-2010	08:06:00	PASSED						
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000
Zero Cal	-0.014	0.022	0.161	1.25	0.846	-0.033	-0.026	0.23	0.005
Zero Avg	-0.015	-0.016	0.161	-0.43	0.913	0.464	-0.027	6.73	0.079
Zero Bias%	0.0%	0.2%	0.0%	0.3%	0.1%	2.4%	0.0%	1.3%	0.2%
Zero Drift%	0.1%	-0.4%	-0.3%	0.0%	0.6%	0.7%	0.0%	1.1%	0.6%
Span Ref Cyl	9.988	9.031	48.660	236.60	45.070	9.988	9.031	242.20	10.590
Span Cal	9.970	8.959	48.633	236.38	45.125	9.987	8.910	242.22	10.629
Span Avg	9.920	8.941	48.033	247.56	43.325	10.181	8.921	236.45	10.635
Span Bias%	0.2%	0.1%	0.7%	2.3%	2.0%	0.9%	0.1%	1.2%	0.0%
Span Drift%	0.4%	0.0%	0.2%	1.5%	-2.1%	0.1%	0.2%	1.1%	-0.3%
Ini Zero Avg	-0.027	0.060	0.438	-0.39	0.358	0.328	-0.025	1.28	-0.105
Ini Span Avg	9.837	8.947	47.894	240.33	45.224	10.167	8.889	231.04	10.724
Run Avg	11.153	8.258	0.082	84.94	21.402	10.836	8.845	78.10	0.251
Co	-0.021	0.022	0.300	-0.41	0.636	0.396	-0.026	4.00	-0.013
Cm	9.878	8.944	47.963	243.94	44.274	10.174	8.905	233.75	10.680
Correct Avg	11.274	8.336	-0.222	82.65	21.448	10.665	8.970	78.12	0.262
System Bias Check End									

Test Run 2 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-06-2010 08:09:01	11.684	7.800	0.091	69.98	23.485	11.243	8.515	92.84	0.105
08-06-2010 08:10:01	11.804	7.670	0.113	56.60	26.726	11.590	8.202	94.65	0.114
08-06-2010 08:11:01	11.385	8.033	0.070	64.26	25.695	11.052	8.468	100.12	0.208
08-06-2010 08:12:01	11.626	7.894	0.140	62.12	23.241	11.284	8.606	106.50	0.376
08-06-2010 08:13:01	11.677	7.836	0.021	58.68	26.853	11.411	8.393	102.09	0.385
08-06-2010 08:14:01	11.401	8.017	0.054	49.86	35.014	11.104	8.531	102.17	0.298
08-06-2010 08:15:01	11.375	8.085	0.097	67.72	32.708	10.978	8.748	111.89	0.261
08-06-2010 08:16:01	11.462	8.020	0.038	86.13	31.062	11.128	8.630	110.29	0.291
08-06-2010 08:17:01	11.308	8.086	0.038	95.08	29.005	11.027	8.630	113.63	0.248
08-06-2010 08:18:01	11.543	7.919	0.129	79.23	26.256	11.156	8.724	114.77	0.225
08-06-2010 08:19:01	11.629	7.794	0.242	60.15	28.425	11.366	8.365	114.33	0.191
08-06-2010 08:20:01	11.334	8.002	0.641	66.00	30.228	11.083	8.444	120.77	0.238
08-06-2010 08:21:01	11.448	7.986	0.619	71.05	25.089	11.102	8.666	117.13	0.240
08-06-2010 08:22:01	11.360	8.019	0.468	71.58	28.550	11.044	8.603	117.50	0.184
08-06-2010 08:23:01	11.065	8.276	0.592	84.39	28.645	10.721	8.826	122.13	0.125
08-06-2010 08:24:01	11.002	8.391	1.347	87.55	28.054	10.572	9.044	136.41	0.134
08-06-2010 08:25:01	11.173	8.253	1.594	87.46	27.098	10.750	8.974	136.72	0.140
08-06-2010 08:26:01	11.214	8.185	1.739	82.08	29.565	10.794	8.868	135.31	0.077
08-06-2010 08:27:01	11.217	8.175	1.653	67.69	30.151	10.861	8.817	140.79	-0.012
08-06-2010 08:28:01	11.097	8.274	1.648	72.26	27.051	10.653	8.948	140.76	0.087
08-06-2010 08:29:01	11.278	8.137	1.567	80.35	31.196	10.796	8.970	141.05	0.254
08-06-2010 08:30:01	11.325	8.078	1.357	77.96	29.067	11.045	8.651	129.78	0.347
08-06-2010 08:31:01	11.042	8.379	1.379	79.48	29.915	10.556	9.029	131.13	0.383
08-06-2010 08:32:01	10.886	8.550	1.304	75.52	31.749	10.641	8.975	125.69	0.376
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-06-2010 08:32:01	11.347	8.077	0.706	73.05	28.534	10.998	8.693	119.10	0.220

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 3 Inlet and Outlet

Test Run 2 End

Final System Bias Check, Run 2 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 3 Inlet and Outlet

Reference Cylinder Numbers

Zero Span

O2-S	CC332317
CO2-S	CC332317
SO2-S	CC321220
NOx-S	CC331862
CO-S	SG9113307BAL
O2-In	CC332317
CO2-In	CC332317
SO2-In	SG9154119BAL
THC-S	CC103598

Date/Time	08-06-2010		08:41:15		PASSED					
Analyte	O2-S	CO2-S	SO2-S	NOX-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm	
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	
Zero Cal	-0.014	0.022	0.161	1.25	0.846	-0.033	-0.026	0.23	0.005	
Zero Avg	-0.011	0.024	0.485	-0.39	0.959	0.359	-0.025	10.37	0.057	
Zero Bias%	0.0%	0.0%	0.4%	0.3%	0.1%	1.9%	0.0%	2.1%	0.2%	
Zero Drift%	0.0%	0.2%	0.4%	0.0%	0.1%	-0.5%	0.0%	0.7%	-0.1%	
Span Ref Cyl	9.988	9.031	48.660	236.60	45.070	9.988	9.031	242.20	10.590	
Span Cal	9.970	8.959	48.633	236.38	45.125	9.987	8.910	242.22	10.629	
Span Avg	9.900	9.042	47.663	241.95	42.529	10.167	9.007	237.65	10.565	
Span Bias%	0.3%	0.5%	1.1%	1.2%	2.9%	0.9%	0.5%	0.9%	0.2%	
Span Drift%	-0.1%	0.6%	-0.4%	-1.2%	-0.9%	-0.1%	0.5%	0.2%	-0.2%	
Ini Zero Avg	-0.015	-0.016	0.161	-0.43	0.913	0.464	-0.027	6.73	0.079	
Ini Span Avg	9.920	8.941	48.033	247.56	43.325	10.181	8.921	236.45	10.635	
Run Avg	11.347	8.077	0.706	73.05	28.534	10.998	8.693	119.10	0.220	
Co	-0.013	0.004	0.323	-0.41	0.936	0.412	-0.026	8.55	0.068	
Cm	9.910	8.992	47.848	244.75	42.927	10.174	8.964	237.05	10.600	
Correct Avg	11.435	8.112	0.392	70.90	29.622	10.831	8.759	117.18	0.153	
System Bias Check End										

Test Run 3 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-06-2010 08:44:03	11.065	8.357	12.128	68.98	23.764	10.267	8.780	129.77	0.154
08-06-2010 08:45:03	11.178	8.286	12.984	82.61	21.633	10.764	8.971	152.82	0.084
08-06-2010 08:46:03	11.415	8.043	19.319	78.54	19.360	11.129	8.680	167.50	0.121
08-06-2010 08:47:03	11.459	8.027	26.852	75.71	21.268	11.034	8.711	192.91	0.083
08-06-2010 08:48:03	11.605	7.882	31.349	67.84	17.455	11.291	8.524	199.47	0.154
08-06-2010 08:49:03	11.386	8.042	34.957	71.67	16.760	11.023	8.625	221.21	0.213
08-06-2010 08:50:03	11.698	7.804	35.378	66.56	18.533	11.345	8.596	232.46	0.241
08-06-2010 08:51:03	11.613	7.812	33.751	60.52	19.523	11.299	8.371	230.53	0.228
08-06-2010 08:52:03	11.535	7.895	27.811	58.48	19.652	11.164	8.580	233.56	0.153
08-06-2010 08:53:03	11.380	8.019	28.414	62.18	16.274	11.055	8.589	237.37	0.115
08-06-2010 08:54:03	10.953	8.467	34.893	71.81	17.645	10.656	8.857	249.37	0.097
08-06-2010 08:55:03	10.950	8.505	32.765	86.52	19.207	10.466	9.267	261.26	-0.002
08-06-2010 08:56:03	11.210	8.220	22.124	83.00	14.844	10.851	8.970	225.85	0.050
08-06-2010 08:57:03	11.164	8.215	21.994	91.13	12.840	10.898	8.713	216.78	-0.030
08-06-2010 08:58:03	11.482	7.971	25.242	81.95	15.003	11.104	8.815	220.76	0.230
08-06-2010 08:59:03	11.642	7.825	23.718	68.47	14.127	11.345	8.441	204.33	0.357
08-06-2010 09:00:03	11.893	7.610	19.167	62.86	14.694	11.615	8.244	191.10	0.344
08-06-2010 09:01:03	11.624	7.782	22.485	62.92	15.090	11.434	8.230	204.14	0.316
08-06-2010 09:02:03	11.285	8.083	24.041	63.22	15.680	10.896	8.653	226.03	0.282
08-06-2010 09:03:03	11.658	7.796	20.115	58.81	13.121	11.279	8.536	217.52	0.310
08-06-2010 09:04:03	11.778	7.706	19.948	61.05	14.037	11.488	8.320	214.03	0.313
08-06-2010 09:05:03	11.626	7.790	18.267	64.83	12.783	11.338	8.343	216.06	0.266
08-06-2010 09:06:03	11.379	8.033	16.254	55.46	13.084	11.146	8.513	209.48	0.163
08-06-2010 09:07:03	11.190	8.243	16.814	62.42	13.914	10.781	8.889	220.49	0.223
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-06-2010 09:07:03	11.423	8.017	24.194	69.47	16.682	11.069	8.634	211.42	0.186

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 3 Inlet and Outlet

Test Run 3 End

Final System Bias Check, Run 3 STRATA Version 3.2

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 3 Inlet and Outlet

	Reference Cylinder Numbers	
	Zero	Span
O2-S		CC332317
CO2-S		CC332317
SO2-S		CC321220
NOx-S		CC331862
CO-S		SG9113307BAL
O2-In		CC332317
CO2-In		CC332317
SO2-In		SG9154119BAL
THC-S		CC103598

Date/Time	08-06-2010	09:16:16	PASSED						
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000
Zero Cal	-0.014	0.022	0.161	1.25	0.846	-0.033	-0.026	0.23	0.005
Zero Avg	-0.016	0.067	1.131	-0.46	1.445	0.335	-0.023	9.12	0.146
Zero Bias%	0.0%	0.2%	1.1%	0.4%	0.7%	1.8%	0.0%	1.8%	0.5%
Zero Drift%	0.0%	0.2%	0.7%	0.0%	0.5%	-0.1%	0.0%	-0.3%	0.3%
Span Ref Cyl	9.988	9.031	48.660	236.60	45.070	9.988	9.031	242.20	10.590
Span Cal	9.970	8.959	48.633	236.38	45.125	9.987	8.910	242.22	10.629
Span Avg	9.874	9.087	49.556	236.30	41.399	10.163	8.933	240.93	10.603
Span Bias%	0.5%	0.7%	1.0%	0.0%	4.2%	0.8%	0.1%	0.3%	0.1%
Span Drift%	-0.1%	0.2%	2.1%	-1.2%	-1.3%	0.0%	-0.4%	0.7%	0.1%
Ini Zero Avg	-0.011	0.024	0.485	-0.39	0.959	0.359	-0.025	10.37	0.057
Ini Span Avg	9.900	9.042	47.663	241.95	42.529	10.167	9.007	237.65	10.565
Run Avg	11.423	8.017	24.194	69.47	16.682	11.069	8.634	211.42	0.186
Co	-0.014	0.045	0.808	-0.43	1.202	0.347	-0.024	9.74	0.102
Cm	9.887	9.064	48.609	239.13	41.964	10.165	8.970	239.29	10.584
Correct Avg	11.538	7.983	23.806	69.04	17.116	10.907	8.694	212.79	0.086
System Bias Check End									

Test Run 4 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-06-2010 09:37:47	11.931	7.615	0.003	70.87	15.169	11.593	8.205	60.96	0.353
08-06-2010 09:38:47	11.819	7.648	-0.215	61.79	16.228	11.530	8.089	58.33	0.283
08-06-2010 09:39:47	11.740	7.724	-0.253	68.76	18.057	11.376	8.278	58.36	0.339
08-06-2010 09:40:47	11.825	7.685	-0.366	78.54	17.692	11.422	8.331	56.84	0.417
08-06-2010 09:41:47	12.040	7.519	-0.441	74.28	17.112	11.728	8.135	54.01	0.433
08-06-2010 09:42:47	11.371	8.079	-0.511	78.01	17.784	11.153	8.239	55.79	0.410
08-06-2010 09:43:47	11.251	8.231	-0.619	81.01	17.221	10.714	8.963	62.40	0.396
08-06-2010 09:44:47	11.503	8.014	-0.382	89.95	13.889	11.172	8.603	59.61	0.323
08-06-2010 09:45:47	11.704	7.853	0.226	97.30	15.939	11.263	8.623	54.65	0.298
08-06-2010 09:46:47	11.970	7.612	0.124	83.86	13.987	11.599	8.272	52.82	0.330
08-06-2010 09:47:46	11.836	7.684	0.156	78.61	13.502	11.518	8.157	53.80	0.301
08-06-2010 09:48:46	11.554	7.926	0.161	63.99	14.689	11.127	8.469	56.28	0.289
08-06-2010 09:49:46	11.657	7.856	0.150	70.19	12.789	11.222	8.590	61.48	0.227
08-06-2010 09:50:46	11.114	8.301	0.097	74.44	13.721	10.836	8.488	59.91	0.098
08-06-2010 09:51:46	11.696	7.811	0.161	85.21	12.501	11.072	8.952	64.84	0.138
08-06-2010 09:52:46	12.236	7.408	0.124	94.25	13.586	11.905	8.075	56.54	0.151
08-06-2010 09:53:46	11.594	7.931	0.070	75.41	16.595	11.362	8.089	55.54	0.118
08-06-2010 09:54:46	11.161	8.337	0.000	59.29	19.106	10.831	8.783	62.88	0.146
08-06-2010 09:55:46	11.120	8.416	-0.011	74.83	18.038	10.679	9.021	65.13	0.171
08-06-2010 09:56:46	11.660	7.954	-0.075	95.36	14.190	11.253	8.725	60.74	0.171
08-06-2010 09:57:46	11.616	7.963	0.064	88.17	14.140	11.272	8.465	60.55	0.176
08-06-2010 09:58:46	11.343	8.218	0.054	68.71	16.894	11.035	8.655	66.04	0.225
08-06-2010 09:59:46	11.211	8.383	-0.011	62.72	16.150	10.804	8.953	70.60	0.192
08-06-2010 10:00:46	11.174	8.391	-0.086	72.08	16.337	10.818	8.965	70.20	0.162
Run Averages									
	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-06-2010 10:00:46	11.589	7.940	-0.066	76.98	15.639	11.220	8.505	59.93	0.256

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 3 Inlet and Outlet

Test Run 4 End

Final System Bias Check, Run 4 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 3 Inlet and Outlet

Reference Cylinder Numbers

Zero Span

O2-S	CC332317
CO2-S	CC332317
SO2-S	CC321220
NOx-S	CC331862
CO-S	SG9113307BAL
O2-In	CC332317
CO2-In	CC332317
SO2-In	SG9154119BAL
THC-S	CC103598

Date/Time	08-06-2010	10:10:44	PASSED	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S
Analyte				%	%	ppm	ppm	ppm	%	%	ppm	ppm
Units												
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.000
Zero Cal	-0.014	0.022	0.161	1.25	0.846	-0.033	-0.026	-0.026	0.23	0.23	0.23	0.005
Zero Avg	-0.001	0.061	0.577	-0.47	0.773	0.326	-0.023	4.65	-0.023	4.65	-0.023	-0.144
Zero Bias%	0.1%	0.2%	0.5%	0.4%	0.1%	1.7%	0.0%	0.0%	0.9%	0.9%	0.9%	0.5%
Zero Drift%	0.1%	0.0%	-0.6%	0.0%	-0.7%	0.0%	0.0%	0.0%	-0.9%	-0.9%	-0.9%	-1.0%
Span Ref Cyl	9.988	9.031	48.660	236.60	45.070	9.988	9.031	242.20	10.590	10.590	10.590	10.590
Span Cal	9.970	8.959	48.633	236.38	45.125	9.987	8.910	242.22	10.629	10.629	10.629	10.629
Span Avg	9.960	9.099	47.525	238.49	41.627	10.163	9.013	235.66	10.780	10.780	10.780	10.780
Span Bias%	0.0%	0.8%	1.2%	0.4%	3.9%	0.8%	0.6%	1.3%	0.5%	0.5%	0.5%	0.5%
Span Drift%	0.4%	0.1%	-2.2%	0.5%	0.3%	0.0%	0.4%	-1.1%	0.6%	0.6%	0.6%	0.6%
Ini Zero Avg	-0.016	0.067	1.131	-0.46	1.445	0.335	-0.023	9.12	0.146	0.146	0.146	0.146
Ini Span Avg	9.874	9.087	49.556	236.30	41.399	10.163	8.933	240.93	10.603	10.603	10.603	10.603
Run Avg	11.589	7.940	-0.066	76.98	15.639	11.220	8.505	59.93	0.256	0.256	0.256	0.256
Co	-0.008	0.064	0.854	-0.46	1.109	0.331	-0.023	6.89	0.001	0.001	0.001	0.001
Cm	9.917	9.093	48.540	237.40	41.513	10.163	8.973	238.30	10.691	10.691	10.691	10.691
Correct Avg	11.670	7.878	-0.939	77.03	16.208	11.062	8.562	55.52	0.253	0.253	0.253	0.253
System Bias Check End												

Test Run 5 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-06-2010 10:13:34	11.848	7.829	0.410	56.69	13.183	10.968	8.361	71.35	0.305
08-06-2010 10:14:34	11.746	7.889	0.258	53.51	16.109	11.421	8.356	82.00	0.295
08-06-2010 10:15:34	11.469	8.161	0.140	65.62	16.471	10.929	8.739	86.40	0.313
08-06-2010 10:16:34	11.644	7.981	0.086	76.13	14.659	11.342	8.611	84.74	0.277
08-06-2010 10:17:34	11.173	8.399	0.113	76.78	16.311	10.753	8.836	91.05	0.238
08-06-2010 10:18:34	11.806	7.869	-0.027	71.85	15.596	11.299	8.857	95.01	0.264
08-06-2010 10:19:34	11.668	7.960	0.081	70.16	14.915	11.457	8.279	86.09	0.272
08-06-2010 10:20:34	11.249	8.320	-0.124	66.38	20.864	10.950	8.761	93.41	0.255
08-06-2010 10:21:34	11.132	8.443	-0.081	76.42	17.188	10.722	8.998	96.55	0.210
08-06-2010 10:22:34	11.247	8.384	0.054	80.25	15.290	10.868	8.992	103.19	0.219
08-06-2010 10:23:34	11.330	8.316	-0.172	79.93	17.874	10.931	8.878	98.40	0.210
08-06-2010 10:24:34	11.148	8.426	-0.118	74.07	21.381	10.768	8.929	99.03	0.164
08-06-2010 10:25:34	11.234	8.388	-0.161	74.89	15.338	10.845	9.041	96.06	0.170
08-06-2010 10:26:34	11.338	8.276	-0.150	71.74	14.099	10.955	8.862	95.41	0.112
08-06-2010 10:27:34	11.277	8.322	-0.172	70.90	15.198	10.945	8.818	93.46	0.075
08-06-2010 10:28:34	11.074	8.511	-0.161	76.34	12.742	10.736	8.987	92.59	0.064
08-06-2010 10:29:34	10.821	8.789	-0.038	95.20	10.584	10.476	9.149	96.61	0.016
08-06-2010 10:30:34	10.970	8.710	-0.070	113.11	8.118	10.560	9.313	97.98	0.203
08-06-2010 10:31:34	11.237	8.424	-0.199	100.92	9.391	10.862	9.062	93.47	0.324
08-06-2010 10:32:34	11.102	8.521	-0.161	115.44	10.511	10.733	8.938	92.80	0.253
08-06-2010 10:33:34	11.725	7.953	-0.150	110.65	7.853	11.221	8.972	87.92	0.273
08-06-2010 10:34:34	12.187	7.535	-0.172	71.79	7.843	11.910	8.194	76.47	0.253
08-06-2010 10:35:34	11.826	7.823	-0.161	52.83	11.978	11.606	8.147	80.62	0.263
08-06-2010 10:36:34	11.685	8.045	-0.161	60.54	10.972	11.200	8.643	90.06	0.310
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-06-2010 10:36:34	11.414	8.219	-0.047	77.57	13.936	11.019	8.780	90.85	0.222

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 3 Inlet and Outlet.
 Test Run 5 End

Final System Bias Check, Run 5 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 3 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S		CC332317
CO2-S		CC332317
SO2-S		CC321220
NOx-S		CC331862
CO-S		SG9113307BAL
O2-In		CC332317
CO2-In		CC332317
SO2-In		SG9154119BAL
THC-S		CC103598

Date/Time	08-06-2010	10:47:37	PASSED	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-in	CO2-In	SO2-In	THC-S	
Analyte				Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm
Zero Ref Cyl	0.000	0.000	0.000	Zero	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.000	
Zero Cal	-0.014	0.022	0.161	Span	1.25	0.846	-0.033	-0.033	-0.026	-0.026	0.23	0.005	
Zero Avg	0.038	0.155	-0.069	Ref	-0.49	1.269	0.324	0.324	-0.021	-0.021	2.67	0.032	
Zero Bias%	0.2%	0.7%	0.3%	Cal	0.4%	0.5%	1.7%	1.7%	0.0%	0.0%	0.5%	0.1%	
Zero Drift%	0.2%	0.5%	-0.7%	Avg	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	-0.4%	0.6%	
Span Ref Cyl	9.988	9.031	48.660	236.60	45.070	9.988	9.031	242.20	242.20	10.590			
Span Cal	9.970	8.959	48.633	236.38	45.125	9.987	8.910	242.22	242.22	10.629			
Span Avg	9.972	9.157	45.078	234.40	41.351	10.169	9.035	233.43	233.43	10.430			
Span Bias%	0.0%	1.1%	3.9%	Ref	0.4%	4.2%	0.9%	0.7%	1.8%	1.8%	0.7%		
Span Drift%	0.1%	0.3%	-2.7%	Cal	-0.8%	-0.3%	0.0%	0.1%	-0.5%	-0.5%	-1.2%		
Ini Zero Avg	-0.001	0.061	0.577	238.49	41.627	10.163	9.013	235.66	4.65	-0.023	-0.144		
Ini Span Avg	9.960	9.099	47.525	238.49	41.627	10.163	9.013	235.66	10.780				
Run Avg	11.414	8.219	-0.047	77.57	13.936	11.019	8.780	90.85	0.222				
Co	0.019	0.108	0.254	46.301	236.45	41.489	10.166	9.024	3.66	-0.022	-0.056		
Cm	9.966	9.128	46.301	236.45	41.489	10.166	9.024	234.54	10.605				
Correct Avg	11.442	8.121	-0.318	77.95	14.383	10.854	8.788	91.46	0.277				
System Bias Check End													

Test Run 6 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-06-2010 10:50:31	11.933	7.860	0.024	63.25	10.875	11.125	8.372	65.44	0.225
08-06-2010 10:51:31	11.981	7.795	-0.118	55.65	12.071	11.580	8.292	76.72	0.209
08-06-2010 10:52:31	12.172	7.673	-0.118	52.46	14.533	11.755	8.235	78.27	0.432
08-06-2010 10:53:31	11.723	8.009	-0.161	49.68	17.612	11.459	8.204	85.24	0.560
08-06-2010 10:54:31	11.572	8.189	-0.156	53.33	15.424	11.123	8.752	94.69	0.522
08-06-2010 10:55:31	11.570	8.155	-0.161	53.64	11.980	11.167	8.662	99.21	0.531
08-06-2010 10:56:31	11.156	8.528	-0.161	62.39	15.185	10.816	8.810	106.33	0.539
08-06-2010 10:57:31	11.009	8.713	-0.280	74.98	14.793	10.548	9.238	110.12	0.535
08-06-2010 10:58:31	11.262	8.469	-0.215	91.89	9.033	10.737	9.182	102.42	0.527
08-06-2010 10:59:31	11.920	7.864	-0.237	79.38	7.914	11.497	8.645	88.71	0.595
08-06-2010 11:00:31	12.096	7.734	-0.242	57.37	10.119	11.715	8.250	86.33	0.623
08-06-2010 11:01:31	11.818	7.954	-0.118	47.64	12.680	11.650	8.253	83.54	0.621
08-06-2010 11:02:30	10.678	9.086	-0.271	60.66	18.859	10.462	8.873	88.55	0.562
08-06-2010 11:03:30	10.708	9.026	-0.258	84.97	14.356	10.096	9.784	101.89	0.623
08-06-2010 11:04:30	11.410	8.351	-0.247	125.66	9.403	11.083	9.009	87.68	0.701
08-06-2010 11:05:30	11.298	8.400	-0.210	126.59	11.067	10.939	8.853	76.77	0.666
08-06-2010 11:06:30	11.771	7.966	-0.226	74.12	10.863	11.349	8.810	74.09	0.674
08-06-2010 11:07:30	11.703	7.961	-0.280	46.13	13.776	11.428	8.341	71.69	0.634
08-06-2010 11:08:30	11.492	8.148	-0.210	44.74	14.155	11.065	8.683	75.24	0.598
08-06-2010 11:09:30	11.551	8.082	-0.242	52.57	15.058	11.247	8.597	71.69	0.613
08-06-2010 11:10:30	11.083	8.515	-0.431	62.92	17.393	10.769	8.796	71.59	0.546
08-06-2010 11:11:30	11.046	8.569	-0.350	93.47	16.703	10.692	9.094	70.34	0.501
08-06-2010 11:12:30	11.138	8.459	-0.161	123.03	12.231	10.742	9.043	66.51	0.503
08-06-2010 11:13:30	11.094	8.526	-0.317	106.25	12.865	10.690	8.924	64.98	0.484
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-06-2010 11:13:30	11.467	8.251	-0.214	72.62	13.284	11.073	8.737	83.24	0.542

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 3 Inlet and Outlet

Test Run 6 End

Final System Bias Check, Run 6 STRATA Version 3.2

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 3 Inlet and Outlet

Reference Cylinder Numbers	
Zero	Span
O2-S	CC332317
CO2-S	CC332317
SO2-S	CC321220
NOx-S	CC331862
CO-S	SG9113307BAL
O2-In	CC332317
CO2-In	CC332317
SO2-In	SG9154119BAL
THC-S	CC103598

Date/Time	08-06-2010		11:22:27		PASSED							
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S			
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm			
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000			
Zero Cal	-0.014	0.022	0.161	1.25	0.846	-0.033	-0.026	0.23	0.005			
Zero Avg	0.025	0.156	0.161	-0.45	0.253	0.316	-0.025	2.81	0.131			
Zero Bias%	0.2%	0.7%	0.0%	0.4%	0.7%	1.7%	0.0%	0.5%	0.4%			
Zero Drift%	-0.1%	0.0%	0.3%	0.0%	-1.1%	0.0%	0.0%	0.0%	0.3%			
Span Ref Cyl	9.988	9.031	48.660	236.60	45.070	9.988	9.031	242.20	10.590			
Span Cal	9.970	8.959	48.633	236.38	45.125	9.987	8.910	242.22	10.629			
Span Avg	9.924	9.195	44.755	232.80	41.122	10.155	8.897	227.17	10.605			
Span Bias%	0.2%	1.3%	4.2%	0.7%	4.5%	0.8%	0.1%	3.1%	0.1%			
Span Drift%	-0.2%	0.2%	-0.4%	-0.3%	-0.3%	-0.1%	-0.8%	-1.3%	0.6%			
Ini Zero Avg	0.038	0.155	-0.069	-0.49	1.269	0.324	-0.021	2.67	0.032			
Ini Span Avg	9.972	9.157	45.078	234.40	41.351	10.169	9.035	233.43	10.430			
Run Avg	11.467	8.251	-0.214	72.62	13.284	11.073	8.737	83.24	0.542			
Co	0.032	0.155	0.046	-0.47	0.761	0.320	-0.023	2.74	0.082			
Cm	9.948	9.176	44.916	233.60	41.237	10.162	8.966	230.30	10.517			
Correct Avg	11.518	8.105	-0.282	73.88	13.944	10.912	8.801	85.68	0.468			
System Bias Check End												

Test Run 7 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-06-2010 11:25:36	10.978	8.574	0.082	69.89	9.116	10.275	8.938	65.60	0.415
08-06-2010 11:26:36	11.211	8.357	0.059	90.52	7.281	10.838	8.852	69.02	0.470
08-06-2010 11:27:36	11.647	7.946	-0.027	106.15	5.470	11.280	8.621	68.08	0.430
08-06-2010 11:28:36	11.614	7.912	-0.091	83.70	6.333	11.313	8.383	69.92	0.427
08-06-2010 11:29:35	11.330	8.152	-0.107	58.19	7.782	11.023	8.563	71.55	0.397
08-06-2010 11:30:35	11.092	8.386	-0.199	48.59	6.092	10.740	8.816	80.05	0.385
08-06-2010 11:31:35	11.040	8.492	-0.118	61.32	6.656	10.538	9.029	83.35	0.363
08-06-2010 11:32:35	11.380	8.165	-0.161	75.58	5.032	10.946	8.820	75.61	0.369
08-06-2010 11:33:35	11.657	7.914	-0.140	72.29	5.651	11.257	8.522	70.39	0.388
08-06-2010 11:34:35	11.644	7.887	-0.129	68.43	5.582	11.227	8.368	66.45	0.392
08-06-2010 11:35:35	11.598	7.937	-0.167	69.24	4.432	11.212	8.444	67.52	0.409
08-06-2010 11:36:35	11.442	8.076	0.059	72.52	5.619	11.049	8.540	70.29	0.398
08-06-2010 11:37:35	11.700	7.912	0.479	82.11	6.009	11.181	8.595	68.88	0.423
08-06-2010 11:38:35	11.643	7.917	0.350	78.12	6.454	11.316	8.292	65.54	0.384
08-06-2010 11:39:35	11.496	8.071	0.388	74.03	6.574	11.023	8.617	73.50	0.380
08-06-2010 11:40:35	11.557	8.016	0.840	63.60	5.866	11.133	8.567	75.57	0.401
08-06-2010 11:41:35	11.260	8.247	2.197	66.46	5.771	10.724	8.736	82.28	0.405
08-06-2010 11:42:35	11.588	7.996	2.348	64.43	6.784	11.178	8.621	82.94	0.400
08-06-2010 11:43:35	11.773	7.825	2.483	67.85	5.926	11.374	8.392	77.98	0.423
08-06-2010 11:44:35	11.560	7.970	5.364	69.20	5.866	11.164	8.355	80.52	0.427
08-06-2010 11:45:35	11.575	7.981	6.640	72.28	7.167	11.170	8.507	91.61	0.407
08-06-2010 11:46:35	11.716	7.887	9.080	73.33	8.985	11.503	8.314	95.03	0.421
08-06-2010 11:47:35	10.970	8.576	5.596	90.88	13.303	10.556	8.687	102.03	0.398
08-06-2010 11:48:35	11.479	8.140	4.438	128.09	7.617	11.006	8.885	86.06	0.427
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-06-2010 11:48:35	11.456	8.098	1.636	75.29	6.725	11.042	8.603	76.65	0.406

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 3 Inlet and Outlet

Test Run 7 End

Final System Bias Check, Run 7 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 3 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S	CC332317	
CO2-S	CC332317	
SO2-S	CC321220	
NOx-S	CC331862	
CO-S	SG9113307BAL	
O2-In	CC332317	
CO2-In	CC332317	
SO2-In	SG9154119BAL	
THC-S	CC103598	

Date/Time	08-06-2010	12:00:21	PASSED						
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000
Zero Cal	-0.014	0.022	0.161	1.25	0.846	-0.033	-0.026	0.23	0.005
Zero Avg	0.025	0.124	-0.485	-0.12	1.627	0.313	-0.020	3.37	0.053
Zero Bias%	0.2%	0.6%	0.7%	0.3%	0.9%	1.7%	0.0%	0.6%	0.2%
Zero Drift%	0.0%	-0.2%	-0.7%	0.1%	1.5%	0.0%	0.0%	0.1%	-0.3%
Span Ref Cyl	9.988	9.031	48.660	236.60	45.070	9.988	9.031	242.20	10.590
Span Cal	9.970	8.959	48.633	236.38	45.125	9.987	8.910	242.22	10.629
Span Avg	9.985	9.189	44.755	235.34	42.570	10.161	8.919	238.62	10.621
Span Bias%	0.1%	1.3%	4.2%	0.2%	2.8%	0.8%	0.0%	0.7%	0.0%
Span Drift%	0.3%	0.0%	0.0%	0.5%	1.6%	0.0%	0.1%	2.3%	0.1%
Ini Zero Avg	0.025	0.156	0.161	-0.45	0.253	0.316	-0.025	2.81	0.131
Ini Span Avg	9.924	9.195	44.755	232.80	41.122	10.155	8.897	227.17	10.605
Run Avg	11.456	8.098	1.636	75.29	6.725	11.042	8.603	76.65	0.406
Co	0.025	0.140	-0.162	-0.28	0.940	0.314	-0.022	3.09	0.092
Cm	9.954	9.192	44.755	234.07	41.846	10.158	8.908	232.90	10.613
Correct Avg	11.499	7.939	1.948	76.30	6.373	10.885	8.722	77.53	0.316
System Bias Check End									

Test Run 8 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-06-2010 12:04:02	11.566	8.065	2.461	52.43	11.683	11.521	8.166	44.46	-0.038
08-06-2010 12:05:02	10.966	8.663	2.666	76.31	13.762	10.611	8.803	55.17	0.130
08-06-2010 12:06:02	11.510	8.168	2.526	103.32	12.205	11.010	9.016	58.74	0.439
08-06-2010 12:07:02	11.468	8.170	2.337	103.62	10.121	11.186	8.554	62.13	0.424
08-06-2010 12:08:01	11.641	8.078	2.347	72.08	10.849	11.224	8.651	65.27	0.395
08-06-2010 12:09:01	11.587	8.079	1.626	52.59	13.055	11.377	8.493	65.00	0.389
08-06-2010 12:10:02	11.000	8.595	1.137	57.03	13.382	10.799	8.702	65.39	0.297
08-06-2010 12:11:02	10.923	8.727	0.824	69.96	11.153	10.399	9.237	66.43	0.301
08-06-2010 12:12:02	11.281	8.407	1.277	84.55	8.467	10.772	9.085	67.71	0.283
08-06-2010 12:13:02	11.514	8.177	2.068	75.84	8.150	11.098	8.754	72.03	0.188
08-06-2010 12:14:02	11.686	8.021	2.181	58.09	10.824	11.333	8.632	75.63	0.212
08-06-2010 12:15:02	11.301	8.333	1.626	60.13	12.720	10.982	8.642	76.41	0.212
08-06-2010 12:16:02	10.917	8.707	1.928	80.46	12.041	10.673	8.938	78.60	0.148
08-06-2010 12:17:02	10.993	8.686	2.219	106.15	13.241	10.475	9.300	81.31	0.173
08-06-2010 12:18:02	11.175	8.468	2.359	109.33	11.305	10.739	9.010	83.08	0.188
08-06-2010 12:19:02	11.102	8.500	1.524	95.20	11.060	10.816	8.863	85.07	0.177
08-06-2010 12:20:02	11.142	8.489	0.953	81.05	11.284	10.795	9.010	85.69	0.154
08-06-2010 12:21:02	10.870	8.735	0.775	80.32	10.783	10.539	8.998	85.71	0.162
08-06-2010 12:22:02	11.266	8.427	0.797	74.51	14.688	10.798	9.106	85.86	0.202
08-06-2010 12:23:02	11.625	8.058	0.711	72.88	12.592	11.303	8.690	87.26	0.179
08-06-2010 12:24:02	11.662	8.023	0.819	58.22	19.444	11.372	8.494	89.51	0.204
08-06-2010 12:25:02	11.812	7.914	0.684	54.52	19.662	11.426	8.458	88.29	0.148
08-06-2010 12:26:02	10.928	8.744	0.485	65.62	18.784	11.168	8.348	87.65	0.163
08-06-2010 12:27:02	10.469	9.174	0.398	81.07	21.004	9.947	9.520	90.33	0.148
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-06-2010 12:27:02	11.267	8.392	1.530	76.04	13.011	10.932	8.811	75.10	0.220

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 3 Inlet and Outlet
 Test Run 8 End

Final System Bias Check, Run 8 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 3 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S		CC332317
CO2-S		CC332317
SO2-S		CC321220
NOx-S		CC331862
CO-S		SG9113307BAL
O2-In		CC332317
CO2-In		CC332317
SO2-In		SG9154119BAL
THC-S		CC103598

Date/Time	08-06-2010		12:38:15		PASSED				
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000
Zero Cal	-0.014	0.022	0.161	1.25	0.846	-0.033	-0.026	0.23	0.005
Zero Avg	0.027	0.192	1.454	-0.23	1.453	0.241	-0.025	-2.16	-0.075
Zero Bias%	0.2%	0.9%	1.4%	0.3%	0.7%	1.3%	0.0%	0.5%	0.3%
Zero Drift%	0.0%	0.4%	2.1%	0.0%	-0.2%	-0.3%	0.0%	-1.1%	-0.4%
Span Ref Cyl	9.988	9.031	48.660	236.60	45.070	9.988	9.031	242.20	10.590
Span Cal	9.970	8.959	48.633	236.38	45.125	9.987	8.910	242.22	10.629
Span Avg	9.964	9.195	45.540	233.92	42.654	10.130	8.959	240.35	10.507
Span Bias%	0.0%	1.3%	3.4%	0.5%	2.8%	0.7%	0.3%	0.4%	0.4%
Span Drift%	-0.1%	0.0%	0.9%	-0.3%	0.1%	-0.1%	0.2%	0.4%	-0.4%
Ini Zero Avg	0.025	0.124	-0.485	-0.12	1.627	0.313	-0.020	3.37	0.053
Ini Span Avg	9.985	9.189	44.755	235.34	42.570	10.161	8.919	238.62	10.621
Run Avg	11.267	8.392	1.530	76.04	13.011	10.932	8.811	75.10	0.220
Co	0.026	0.158	0.485	-0.17	1.540	0.277	-0.022	0.61	-0.011
Cm	9.974	9.192	45.147	234.63	42.612	10.146	8.939	239.49	10.564
Correct Avg	11.286	8.231	1.139	76.80	12.588	10.784	8.902	75.53	0.231
System Bias Check End									

Test Run 9 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
Begin calculating run averages									
08-06-2010 12:41:04	11.051	8.583	0.898	91.61	14.818	10.457	9.042	75.02	0.208
08-06-2010 12:42:04	11.115	8.491	0.641	81.12	12.385	10.751	8.878	76.36	0.212
08-06-2010 12:43:04	11.345	8.293	0.393	64.30	14.118	11.048	8.801	77.03	0.132
08-06-2010 12:44:04	11.581	8.103	0.312	60.48	17.077	11.197	8.618	74.01	0.098
08-06-2010 12:45:04	11.452	8.172	0.183	50.98	17.859	11.186	8.447	67.64	0.141
08-06-2010 12:46:04	11.255	8.351	0.167	60.07	14.781	11.024	8.640	72.43	0.148
08-06-2010 12:47:04	11.223	8.408	0.145	82.69	13.568	10.936	8.821	76.89	0.129
08-06-2010 12:48:04	11.084	8.548	0.070	93.80	13.476	10.783	8.898	83.08	0.136
08-06-2010 12:49:04	11.047	8.564	-0.075	86.10	12.637	10.720	8.922	72.50	0.153
08-06-2010 12:50:04	11.345	8.295	-0.113	71.69	15.838	11.062	8.892	66.49	0.231
08-06-2010 12:51:04	11.188	8.444	-0.161	70.13	16.484	10.856	8.751	65.75	0.598
08-06-2010 12:52:04	11.250	8.374	-0.156	71.93	14.213	10.964	8.791	65.03	0.565
08-06-2010 12:53:04	11.334	8.316	-0.150	78.53	12.576	11.012	8.812	64.42	0.606
08-06-2010 12:54:04	11.475	8.197	-0.161	80.58	12.088	11.082	8.689	63.37	0.636
08-06-2010 12:55:04	11.694	7.967	-0.167	61.07	13.846	11.513	8.385	62.78	0.598
08-06-2010 12:56:04	11.224	8.359	-0.199	58.18	14.249	10.930	8.591	65.12	0.501
08-06-2010 12:57:04	11.421	8.254	-0.161	63.21	14.477	11.057	8.787	67.96	0.449
08-06-2010 12:58:04	11.381	8.262	-0.145	71.76	15.992	11.137	8.558	60.30	0.563
08-06-2010 12:59:04	11.281	8.372	-0.172	70.38	14.741	11.005	8.760	56.91	0.603
08-06-2010 13:00:04	11.345	8.322	-0.156	59.75	14.403	11.021	8.843	58.13	0.591
08-06-2010 13:01:04	11.102	8.499	-0.183	67.03	15.884	10.820	8.776	58.56	0.545
08-06-2010 13:02:04	10.711	8.872	-0.156	84.49	14.680	10.495	9.008	56.50	0.587
08-06-2010 13:03:04	10.827	8.842	-0.150	104.74	11.737	10.386	9.378	60.34	0.579
08-06-2010 13:04:04	11.274	8.421	-0.183	107.10	10.135	10.916	8.994	55.35	0.653
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm	THC-S ppm
08-06-2010 13:04:04	11.250	8.388	0.014	74.67	14.253	10.931	8.795	66.75	0.402

Operator: Bill Harris
 Plant Name: Huntington RRF
 Location: Unit 3 Inlet and Outlet
 Test Run 9 End

Final System Bias Check, Run 9 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 3 Inlet and Outlet

Reference Cylinder Numbers

	Zero	Span
O2-S		CC332317
CO2-S		CC332317
SO2-S		CC321220
NOx-S		CC331862
CO-S		SG9113307BAL
O2-In		CC332317
CO2-In		CC332317
SO2-In		SG9154119BAL
THC-S		CC103598

Date/Time	08-06-2010		13:16:57		PASSED							
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In	THC-S	ppm	ppm	
Units	%	%	ppm	ppm	ppm	%	%	ppm	ppm			
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00	0.000	0.00	0.000	
Zero Cal	-0.014	0.022	0.161	1.25	0.846	-0.033	-0.026	0.23	0.005			
Zero Avg	0.021	0.220	0.346	-0.53	1.141	0.321	-0.024	0.15	0.243			
Zero Bias%	0.2%	1.1%	0.2%	0.4%	0.3%	1.7%	0.0%	0.0%	0.8%			
Zero Drift%	0.0%	0.2%	-1.2%	-0.1%	-0.3%	0.4%	0.0%	0.5%	1.1%			
Span Ref Cyl	9.988	9.031	48.660	236.60	45.070	9.988	9.031	242.20	10.590			
Span Cal	9.970	8.959	48.633	236.38	45.125	9.987	8.910	242.22	10.629			
Span Avg	9.921	9.227	47.848	232.98	42.209	10.160	8.941	227.72	10.505			
Span Bias%	0.2%	1.5%	0.9%	0.7%	3.3%	0.8%	0.2%	3.0%	0.4%			
Span Drift%	-0.2%	0.2%	2.5%	-0.2%	-0.5%	0.1%	-0.1%	-2.6%	0.0%			
Ini Zero Avg	0.027	0.192	1.454	-0.23	1.453	0.241	-0.025	-2.16	-0.075			
Ini Span Avg	9.964	9.195	45.540	233.92	42.654	10.130	8.959	240.35	10.507			
Run Avg	11.250	8.388	0.014	74.67	14.253	10.931	8.795	66.75	0.402			
Co	0.024	0.206	0.900	-0.38	1.297	0.281	-0.024	-1.01	0.084			
Cm	9.943	9.211	46.694	233.45	42.431	10.145	8.950	234.03	10.506			
Correct Avg	11.304	8.206	-0.942	75.94	14.196	10.784	8.875	69.83	0.324			
System Bias Check End												

Test Run 10 STRATA Version 3.2

	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm
Begin calculating run averages								
08-06-2010 13:20:06	11.313	8.378	0.247	83.29	13.220	10.707	8.849	61.57
08-06-2010 13:21:06	11.468	8.235	0.140	86.58	11.282	11.138	8.650	63.44
08-06-2010 13:22:06	11.660	8.085	0.156	74.98	11.886	11.345	8.553	66.18
08-06-2010 13:23:06	11.434	8.219	0.097	56.51	14.670	11.233	8.509	71.80
08-06-2010 13:24:06	11.387	8.289	0.070	56.51	15.670	11.035	8.812	83.02
08-06-2010 13:25:06	11.358	8.291	0.269	55.14	16.252	11.151	8.570	82.97
08-06-2010 13:26:06	11.444	8.289	0.317	66.05	18.254	11.086	8.830	89.28
08-06-2010 13:27:06	11.354	8.341	0.350	61.95	17.135	11.170	8.572	82.94
08-06-2010 13:28:06	10.663	8.972	0.431	87.97	17.765	10.289	9.069	86.21
08-06-2010 13:29:06	10.924	8.765	0.447	95.86	13.641	10.380	9.478	89.60
08-06-2010 13:30:06	11.471	8.221	0.441	99.67	9.987	11.159	8.794	78.63
08-06-2010 13:31:06	11.390	8.283	0.172	112.01	10.428	10.940	8.720	78.70
08-06-2010 13:32:06	11.452	8.236	0.269	96.88	9.826	11.042	8.711	81.04
08-06-2010 13:33:06	11.696	8.045	0.436	87.94	9.223	11.256	8.662	86.98
08-06-2010 13:34:06	11.429	8.230	0.458	73.41	9.233	11.040	8.556	86.22
08-06-2010 13:35:06	11.350	8.337	0.571	69.05	12.117	10.913	8.865	91.61
08-06-2010 13:36:06	11.488	8.204	0.770	63.30	9.941	11.111	8.710	92.54
08-06-2010 13:37:06	11.537	8.146	0.943	61.40	9.547	11.022	8.712	96.78
08-06-2010 13:38:06	11.541	8.154	1.050	63.29	11.230	11.143	8.532	93.77
08-06-2010 13:39:06	11.549	8.163	0.916	59.57	13.208	11.171	8.650	89.60
08-06-2010 13:40:06	11.310	8.369	1.018	75.78	15.091	10.963	8.739	92.31
08-06-2010 13:41:06	11.378	8.381	0.705	96.86	15.505	10.883	8.932	91.10
08-06-2010 13:42:06	11.487	8.231	0.474	91.08	10.784	11.129	8.648	79.23
08-06-2010 13:43:06	11.463	8.259	0.296	78.00	9.790	11.050	8.726	81.94
Run Averages	O2-S %	CO2-S %	SO2-S ppm	NOx-S ppm	CO-S ppm	O2-In %	CO2-In %	SO2-In ppm
08-06-2010 13:43:06	11.398	8.297	0.460	77.21	12.737	11.015	8.744	83.23

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 3 Inlet and Outlet

Test Run 10 End

Final System Bias Check, Run 10 STRATA Version 3.2

Operator: Bill Harris

Plant Name: Huntington RRF

Location: Unit 3 Inlet and Outlet

Reference Cylinder Numbers

Zero Span

O2-S	CC332317
CO2-S	CC332317
SO2-S	CC321220
NOx-S	CC331862
CO-S	SG9113307BAL
O2-In	CC332317
CO2-In	CC332317
SO2-In	SG9154119BAL

Date/Time	08-06-2010		13:52:56		PASSED			
Analyte	O2-S	CO2-S	SO2-S	NOx-S	CO-S	O2-In	CO2-In	SO2-In
Units	%	%	ppm	ppm	ppm	%	%	ppm
Zero Ref Cyl	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.00
Zero Cal	-0.014	0.022	0.161	1.25	0.846	-0.033	-0.026	0.23
Zero Avg	0.037	0.181	0.808	-0.50	1.341	0.317	-0.025	0.97
Zero Bias%	0.2%	0.9%	0.7%	0.4%	0.6%	1.7%	0.0%	0.1%
Zero Drift%	0.1%	-0.2%	0.5%	0.0%	0.2%	0.0%	0.0%	0.2%
Span Ref Cyl	9.988	9.031	48.660	236.60	45.070	9.988	9.031	242.20
Span Cal	9.970	8.959	48.633	236.38	45.125	9.987	8.910	242.22
Span Avg	9.981	9.182	46.971	235.37	43.568	10.151	8.914	227.96
Span Bias%	0.1%	1.2%	1.8%	0.2%	1.7%	0.8%	0.0%	2.9%
Span Drift%	0.3%	-0.2%	-1.0%	0.5%	1.5%	0.0%	-0.2%	0.0%
Ini Zero Avg	0.021	0.220	0.346	-0.53	1.141	0.321	-0.024	0.15
Ini Span Avg	9.921	9.227	47.848	232.98	42.209	10.160	8.941	227.72
Run Avg	11.398	8.297	0.460	77.21	12.737	11.015	8.744	83.23
Co	0.029	0.201	0.577	-0.51	1.241	0.319	-0.024	0.56
Cm	9.951	9.204	47.409	234.17	42.889	10.156	8.928	227.84
Correct Avg	11.444	8.121	-0.121	78.36	12.440	10.860	8.845	88.10
System Bias Check End								

APPENDIX C
Source CEMS Data Printouts
O₂, CO₂, SO₂, NO_x, CO

Economizer Rata Report

R#1

Company: Covanta Huntington, Inc.
 Report Name: UNIT #1 ECON RATA



Start of Report: 08/03/2010 08:46
 End of Report: 08/03/2010 09:09 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G8-C6	G8-C2	G8-C1
Long Descrip.	U-1 SO2 E	U-1 CO2 E	U-1 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/03/2010 08:46	88	9.3	10.4
08/03/2010 08:47	75	9.2	10.5
08/03/2010 08:48	71	9.5	10.2
08/03/2010 08:49	69	9.4	10.2
08/03/2010 08:50	59	8.9	10.7
08/03/2010 08:51	53	8.8	10.9
08/03/2010 08:52	45	8.6	11.1
08/03/2010 08:53	39	8.6	11.1
08/03/2010 08:54	37	8.6	11.0
08/03/2010 08:55	34	8.4	11.2
08/03/2010 08:56	32	8.8	10.9
08/03/2010 08:57	33	9.1	10.5
08/03/2010 08:58	30	9.0	10.6
08/03/2010 08:59	28	8.9	10.6
08/03/2010 09:01		7.8	
08/03/2010 09:02	28	<	10.2 <
08/03/2010 09:03	33	9.7	9.8
08/03/2010 09:04	35	9.8	9.6
08/03/2010 09:05	34	9.7	9.8
08/03/2010 09:06	32	9.0	10.6
08/03/2010 09:07	32	9.5	10.1
08/03/2010 09:08	50	9.9	9.6
08/03/2010 09:09	50	9.8	9.8
Raw Average	=	44	9.1 10.4
O2 Corrected Avg.	=	59	
Period % Recovery	=	95.7	100.0 95.7

Stack Rata Report

R#1

Company: Covanta Huntington, Inc.
 Report Name: UNIT #1 STACK RATA



Start of Report: 08/03/2010 08:46
 End of Report: 08/03/2010 09:09

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G8-C10	G8-C9	G8-C3	G8-C5	G8-C8	G8-C7	G8-C19	
Long Descrip.	U-1 NOx S	U-1 SO2 S	U-1 CO St	U-1 CO Se	U-1 CO2 S	U-1 O2 St	U-1 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/03/2010 08:46	83.8	1	12	12	8.2	11.41	80.0	
08/03/2010 08:47	75.5	0	11	11	8.1	11.49	80.0	
08/03/2010 08:48	71.3	0	12	12	8.3	11.24	80.0	
08/03/2010 08:49	60.3	0	12	12	8.3	11.33	79.0	
08/03/2010 08:50	68.8	0	13	13	7.9	11.74	79.0	
08/03/2010 08:51	62.8	0	13	13	7.7	11.93	78.0	
08/03/2010 08:52	70.5	0	17	17	7.6	12.06	77.0	
08/03/2010 08:53	84.8	0	15	15	7.5	12.08	76.0	
08/03/2010 08:54	90.5	0	15	15	7.6	12.00	76.0	
08/03/2010 08:55	88.5	0	14	14	7.4	12.15	75.0	
08/03/2010 08:56	87.3	0	16	16	7.7	11.79	75.0	
08/03/2010 08:57	71.0	0	16	16	8.0	11.53	75.0	
08/03/2010 08:58	73.3	0	14	14	7.9	11.63	76.0	
08/03/2010 08:59	84.3	0	10	10	7.9	11.63	76.0	
08/03/2010 09:00								
08/03/2010 09:01								
08/03/2010 09:02	98.8	<	0	<	25	<	8.3	11.15 < 77.0
08/03/2010 09:03	101.5	0	16	16	8.5	10.86	78.0	
08/03/2010 09:04	99.0	0	13	13	8.6	10.74	78.0	
08/03/2010 09:05	104.3	0	14	14	8.5	10.94	78.0	
08/03/2010 09:06	100.8	0	14	14	7.9	11.60	78.0	
08/03/2010 09:07	84.0	0	17	17	8.3	11.14	79.0	
08/03/2010 09:08	85.0	0	20	20	8.7	10.76	80.0	
08/03/2010 09:09	78.0	0	15	15	8.6	10.89	80.0	
Raw Average	=	82	0	14.7	14.7	8.0	11.4	77.5
O2 Corrected Avg.	=	122	0	21	21			
Lbs./Hour Avg.	=	29.65	0.02	3.20				
Period % Recovery	=	95.7	95.7	95.7	100.0	95.7	100.0	

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Economizer Rata Report

Company: Covanta Huntington, Inc.
 Report Name: UNIT #1 ECON RATA



Start of Report: 08/03/2010 09:25
 End of Report: 08/03/2010 09:48 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G8-C6	G8-C2	G8-C1
Long Descrip.	U-1 SO2 E	U-1 CO2 E	U-1 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/03/2010 09:25	48	9.7	9.8
08/03/2010 09:26	45	9.4	10.1
08/03/2010 09:27	46	9.2	10.4
08/03/2010 09:28	57	9.7	10.0
08/03/2010 09:29	67	10.0	9.7
08/03/2010 09:30	77	10.8	8.5
08/03/2010 09:31	73	9.8	9.7
08/03/2010 09:32	65	9.6	9.9
08/03/2010 09:33	62	9.4	10.1
08/03/2010 09:34	64	9.6	9.9
08/03/2010 09:35	62	9.4	10.1
08/03/2010 09:36	61	9.9	9.6
08/03/2010 09:37	64	9.9	9.6
08/03/2010 09:38	59	10.4	9.1
08/03/2010 09:39	63	9.8	9.5
08/03/2010 09:40	57	9.3	10.1
08/03/2010 09:41	54	9.0	10.5
08/03/2010 09:42	54	9.3	10.2
08/03/2010 09:43	61	9.7	9.7
08/03/2010 09:44	63	9.2	10.3
08/03/2010 09:45	60	9.5	10.0
08/03/2010 09:46	61	9.5	10.1
08/03/2010 09:47	63	9.5	10.0
08/03/2010 09:48	64	9.1	10.4
Raw Average =	60	9.6	9.8
O2 Corrected Avg. =	76		
Period % Recovery =	100.0	100.0	100.0

Stack Rata Report

R#2

Company: Covanta Huntington, Inc.
 Report Name: UNIT #1 STACK RATA



Start of Report: 08/03/2010 09:25
 End of Report: 08/03/2010 09:48

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G8-C10	G8-C9	G8-C3	G8-C5	G8-C8	G8-C7	G8-C19	
Long Descrip.	U-1 NOx S	U-1 SO2 S	U-1 CO St	U-1 CO Se	U-1 CO2 S	U-1 O2 St	U-1 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/03/2010 09:25	96.8	0	8	8	8.6	10.90	83.0	
08/03/2010 09:26	91.8	0	9	9	8.3	11.24	82.0	
08/03/2010 09:27	60.3	0	11	11	8.1	11.43	82.0	
08/03/2010 09:28	63.8	0	15	15	8.5	11.03	82.0	
08/03/2010 09:29	87.5	0	13	13	8.7	10.71	83.0	
08/03/2010 09:30	128.8	0	14	14	9.6	9.79	83.0	
08/03/2010 09:31	126.3	0	9	9	8.6	10.83	83.0	
08/03/2010 09:32	104.5	0	8	8	8.5	11.01	83.0	
08/03/2010 09:33	77.8	0	9	9	8.2	11.23	83.0	
08/03/2010 09:34	77.3	0	12	12	8.5	10.98	83.0	
08/03/2010 09:35	57.8	0	12	12	8.2	11.21	83.0	
08/03/2010 09:36	63.0	0	14	14	8.6	10.74	84.0	
08/03/2010 09:37	80.5	0	12	12	8.7	10.76	84.0	
08/03/2010 09:38	106.3	0	10	10	9.2	10.20	85.0	
08/03/2010 09:39	103.8	0	9	9	8.7	10.71	85.0	
08/03/2010 09:40	68.8	0	8	8	8.2	11.29	84.0	
08/03/2010 09:41	52.5	0	10	10	7.9	11.55	83.0	
08/03/2010 09:42	66.3	0	14	14	8.2	11.25	84.0	
08/03/2010 09:43	79.5	0	15	15	8.6	10.84	84.0	
08/03/2010 09:44	66.5	0	12	12	8.2	11.33	84.0	
08/03/2010 09:45	60.0	0	12	12	8.4	11.08	84.0	
08/03/2010 09:46	63.8	0	13	13	8.3	11.19	84.0	
08/03/2010 09:47	68.0	0	15	15	8.4	11.09	83.0	
08/03/2010 09:48	62.8	0	16	16	8.0	11.51	83.0	
Raw Average	=	79	0	11.6	11.6	8.4	11.0	83.3
O2 Corrected Avg.	=	111	0	16	16			
Lbs./Hour Avg.	=	28.99	0.00	2.58				
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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Economizer Rata Report

R#3

Company: Covanta Huntington, Inc.
 Report Name: UNIT #1 ECON RATA



Start of Report: 08/03/2010 10:11
 End of Report: 08/03/2010 10:34 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G8-C6	G8-C2	G8-C1
Long Descrip.	U-1 SO2 E	U-1 CO2 E	U-1 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/03/2010 10:11	71	9.7	9.9
08/03/2010 10:12	73	9.6	9.9
08/03/2010 10:13	74	10.1	9.5
08/03/2010 10:14	78	9.9	9.6
08/03/2010 10:15	70	9.8	9.7
08/03/2010 10:16	62	9.4	10.2
08/03/2010 10:17	63	10.1	9.4
08/03/2010 10:18	65	9.9	9.6
08/03/2010 10:19	65	10.2	9.3
08/03/2010 10:20	64	10.1	9.4
08/03/2010 10:21	68	10.3	9.0
08/03/2010 10:22	71	9.9	9.6
08/03/2010 10:23	66	9.6	9.9
08/03/2010 10:24	68	9.7	9.9
08/03/2010 10:25	75	10.1	9.5
08/03/2010 10:26	87	10.0	9.5
08/03/2010 10:27	84	9.6	10.0
08/03/2010 10:28	83	9.6	10.0
08/03/2010 10:29	93	10.3	9.1
08/03/2010 10:30	98	9.6	9.9
08/03/2010 10:31	95	9.5	10.2
08/03/2010 10:32	107	9.7	10.0
08/03/2010 10:33	125	9.6	9.9
08/03/2010 10:34	114	9.1	10.6
Raw Average =	79	9.8	9.7
O2 Corrected Avg. =	99		
Period % Recovery =	100.0	100.0	100.0

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Stack Rata Report

R#3

Company: Covanta Huntington, Inc.
 Report Name: UNIT #1 STACK RATA



Start of Report: 08/03/2010 10:11
 End of Report: 08/03/2010 10:34

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G8-C10	G8-C9	G8-C3	G8-C5	G8-C8	G8-C7	G8-C19	
Long Descrip.	U-1 NOx S	U-1 SO2 S	U-1 CO St	U-1 CO Se	U-1 CO2 S	U-1 O2 St	U-1 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/03/2010 10:11	87.0	0	12	12	8.4	11.04	80.0	
08/03/2010 10:12	83.3	0	12	12	8.5	11.03	80.0	
08/03/2010 10:13	81.3	0	12	12	8.8	10.61	80.0	
08/03/2010 10:14	90.8	0	14	14	8.8	10.68	80.0	
08/03/2010 10:15	98.3	0	12	12	8.7	10.80	80.0	
08/03/2010 10:16	89.3	0	11	11	8.3	11.23	80.0	
08/03/2010 10:17	82.3	0	12	12	8.8	10.59	80.0	
08/03/2010 10:18	76.8	0	14	14	8.8	10.71	80.0	
08/03/2010 10:19	88.5	0	12	12	8.9	10.45	80.0	
08/03/2010 10:20	100.3	0	10	10	8.9	10.51	81.0	
08/03/2010 10:21	121.3	0	10	10	9.2	10.16	81.0	
08/03/2010 10:22	105.0	0	8	8	8.8	10.68	81.0	
08/03/2010 10:23	80.0	0	8	8	8.5	10.95	80.0	
08/03/2010 10:24	60.8	0	9	9	8.5	10.94	81.0	
08/03/2010 10:25	75.5	0	11	11	8.8	10.64	81.0	
08/03/2010 10:26	106.5	0	10	10	8.9	10.59	81.0	
08/03/2010 10:27	97.8	0	8	8	8.4	11.10	80.0	
08/03/2010 10:28	78.5	0	12	12	8.4	11.06	81.0	
08/03/2010 10:29	82.5	0	14	14	9.2	10.29	81.0	
08/03/2010 10:30	80.8	0	11	11	8.6	10.98	80.0	
08/03/2010 10:31	80.8	0	9	9	8.3	11.25	80.0	
08/03/2010 10:32	87.8	0	11	11	8.5	11.04	80.0	
08/03/2010 10:33	88.5	0	13	13	8.6	10.99	80.0	
08/03/2010 10:34	73.5	0	13	13	8.0	11.59	79.0	
Raw Average	=	87	0	11.1	11.1	8.6	10.8	80.2
O2 Corrected Avg.	=	120	0	15	15			
Lbs./Hour Avg.	=	29.94	0.00	2.32				
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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Economizer Rata Report

R#4

Company: Covanta Huntington, Inc.
Report Name: UNIT #1 ECON RATA



Start of Report: 08/03/2010 10:48
End of Report: 08/03/2010 11:11 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G8-C6	G8-C2	G8-C1
Long Descrip.	U-1 SO2 E	U-1 CO2 E	U-1 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/03/2010 10:48	82	9.3	10.4
08/03/2010 10:49	79	9.1	10.5
08/03/2010 10:50	74	8.8	10.8
08/03/2010 10:51	69	8.7	11.0
08/03/2010 10:52	65	9.0	10.7
08/03/2010 10:53	61	8.7	11.0
08/03/2010 10:54	55	8.8	11.0
08/03/2010 10:55	53	8.9	10.9
08/03/2010 10:56	54	9.6	10.1
08/03/2010 10:57	56	9.7	9.9
08/03/2010 10:58	54	10.0	9.7
08/03/2010 10:59	54	10.8	8.7
08/03/2010 11:01		9.1	
08/03/2010 11:02	37 <	9.7	9.7 <
08/03/2010 11:03	40	9.6	10.0
08/03/2010 11:04	39	9.4	10.3
08/03/2010 11:05	37	9.3	10.3
08/03/2010 11:06	37	9.5	10.1
08/03/2010 11:07	38	9.5	10.2
08/03/2010 11:08	39	9.5	10.1
08/03/2010 11:09	38	9.6	10.1
08/03/2010 11:10	42	9.9	9.7
08/03/2010 11:11	41	9.6	9.9
Raw Average	= 52	9.4	10.2
O2 Corrected Avg.	= 67		
Period % Recovery	= 95.7	100.0	95.7

123

Stack Rata Report

Rn4

Company: Covanta Huntington, Inc.
 Report Name: UNIT #1 STACK RATA



Start of Report: 08/03/2010 10:48
 End of Report: 08/03/2010 11:11

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G8-C10	G8-C9	G8-C3	G8-C5	G8-C8	G8-C7	G8-C19	
Long Descrip.	U-1 NOx S	U-1 SO2 S	U-1 CO St	U-1 CO Se	U-1 CO2 S	U-1 O2 St	U-1 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/03/2010 10:48	61.5	0	20	20	8.2	11.39	78.0	
08/03/2010 10:49	80.0	0	16	16	8.1	11.50	77.0	
08/03/2010 10:50	76.5	0	16	16	7.7	11.90	76.0	
08/03/2010 10:51	67.3	0	18	18	7.5	12.18	76.0	
08/03/2010 10:52	89.0	0	18	18	7.7	11.90	76.0	
08/03/2010 10:53	80.0	0	15	15	7.6	12.05	75.0	
08/03/2010 10:54	75.5	0	19	19	7.7	11.96	74.0	
08/03/2010 10:55	84.3	0	19	19	7.8	11.83	75.0	
08/03/2010 10:56	80.5	0	19	19	8.4	11.15	75.0	
08/03/2010 10:57	82.8	0	17	17	8.5	10.96	76.0	
08/03/2010 10:58	84.0	0	15	15	8.7	10.78	77.0	
08/03/2010 10:59	90.0	0	14	14	9.5	9.91	79.0	
08/03/2010 11:00								
08/03/2010 11:01								
08/03/2010 11:02	149.3	<	0	<	11	<	8.6	10.79 < 82.0
08/03/2010 11:03	143.0	0	9	9	8.6	11.04	81.0	
08/03/2010 11:04	109.3	0	10	10	8.2	11.35	81.0	
08/03/2010 11:05	68.3	0	15	15	8.1	11.36	81.0	
08/03/2010 11:06	55.3	0	14	14	8.3	11.23	81.0	
08/03/2010 11:07	61.5	0	11	11	8.3	11.25	81.0	
08/03/2010 11:08	64.8	0	12	12	8.3	11.20	81.0	
08/03/2010 11:09	63.5	0	15	15	8.3	11.15	81.0	
08/03/2010 11:10	74.0	0	16	16	8.6	10.83	81.0	
08/03/2010 11:11	84.0	0	11	11	8.4	11.04	81.0	
Raw Average	=	82	0	15.0	15.0	8.2	11.3	78.6
O2 Corrected Avg.	=	120	0	21	21			
Lbs./Hour Avg.	=	29.29	0.00	3.22				
Period % Recovery	=	95.7	95.7	95.7	100.0	95.7	100.0	

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Economizer Rata Report

R#5

Company: Covanta Huntington, Inc.
Report Name: UNIT #1 ECON RATA



Start of Report: 08/03/2010 11:24
End of Report: 08/03/2010 11:47 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G8-C6	G8-C2	G8-C1
Long Descrip.	U-1 SO2 E	U-1 CO2 E	U-1 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/03/2010 11:24	106	9.5	10.1
08/03/2010 11:25	114	9.5	10.0
08/03/2010 11:26	119	9.3	10.2
08/03/2010 11:27	115	9.5	10.2
08/03/2010 11:28	122	9.7	10.0
08/03/2010 11:29	138	9.7	9.9
08/03/2010 11:30	155	9.9	9.7
08/03/2010 11:31	153	9.4	10.2
08/03/2010 11:32	147	9.2	10.4
08/03/2010 11:33	147	9.4	10.3
08/03/2010 11:34	147	10.2	9.5
08/03/2010 11:35	135	10.0	9.5
08/03/2010 11:36	120	10.0	9.6
08/03/2010 11:37	113	10.0	9.5
08/03/2010 11:38	106	9.8	9.8
08/03/2010 11:39	103	9.4	10.2
08/03/2010 11:40	101	9.8	9.9
08/03/2010 11:41	106	9.6	10.0
08/03/2010 11:42	105	9.9	9.8
08/03/2010 11:43	111	10.1	9.5
08/03/2010 11:44	102	9.9	9.7
08/03/2010 11:45	97	9.8	9.9
08/03/2010 11:46	90	9.4	10.3
08/03/2010 11:47	87	9.6	10.1
Raw Average	= 118	9.6	9.9
O2 Corrected Avg.	= 149		
Period % Recovery	= 100.0	100.0	100.0

Stack Rata Report

R+5

Company: Covanta Huntington, Inc.
 Report Name: UNIT #1 STACK RATA



Start of Report: 08/03/2010 11:24
 End of Report: 08/03/2010 11:47

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G8-C10	G8-C9	G8-C3	G8-C5	G8-C8	G8-C7	G8-C19	
Long Descrip.	U-1 NOx S	U-1 SO2 S	U-1 CO St	U-1 CO Se	U-1 CO2 S	U-1 O2 St	U-1 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/03/2010 11:24	75.5	0	8	8	8.3	11.14	83.0	
08/03/2010 11:25	84.5	0	10	10	8.3	11.10	83.0	
08/03/2010 11:26	81.8	0	11	11	8.2	11.31	82.0	
08/03/2010 11:27	72.3	0	11	11	8.2	11.26	82.0	
08/03/2010 11:28	71.3	0	12	12	8.4	11.04	82.0	
08/03/2010 11:29	76.3	0	11	11	8.5	10.94	82.0	
08/03/2010 11:30	97.5	1	9	9	8.6	10.79	82.0	
08/03/2010 11:31	75.5	3	10	10	8.2	11.29	82.0	
08/03/2010 11:32	53.0	4	12	12	8.1	11.46	81.0	
08/03/2010 11:33	52.8	4	16	16	8.2	11.29	82.0	
08/03/2010 11:34	80.5	4	17	17	8.9	10.63	82.0	
08/03/2010 11:35	104.0	4	13	13	8.8	10.66	82.0	
08/03/2010 11:36	111.5	3	13	13	8.8	10.71	82.0	
08/03/2010 11:37	97.3	3	14	14	8.8	10.65	82.0	
08/03/2010 11:38	79.0	2	12	12	8.6	10.90	82.0	
08/03/2010 11:39	66.0	2	13	13	8.3	11.25	82.0	
08/03/2010 11:40	62.3	1	15	15	8.5	11.00	82.0	
08/03/2010 11:41	68.8	1	13	13	8.5	11.06	82.0	
08/03/2010 11:42	84.5	1	14	14	8.6	10.89	82.0	
08/03/2010 11:43	101.3	1	13	13	8.9	10.61	83.0	
08/03/2010 11:44	103.8	0	11	11	8.8	10.78	83.0	
08/03/2010 11:45	85.8	0	10	10	8.5	10.98	82.0	
08/03/2010 11:46	64.5	0	10	10	8.3	11.31	82.0	
08/03/2010 11:47	67.5	0	12	12	8.3	11.19	82.0	
Raw Average	=	79	1	12.0	12.0	8.4	11.0	82.1
O2 Corrected Avg.	=	112	1	16	16			
Lbs./Hour Avg.	=	28.54	0.70	2.62				
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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Economizer Rata Report

Company: Covanta Huntington, Inc.
 Report Name: UNIT #1 ECON RATA



Start of Report: 08/03/2010 12:03
 End of Report: 08/03/2010 12:26 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G8-C6	G8-C2	G8-C1
Long Descrip.	U-1 SO2 E	U-1 CO2 E	U-1 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/03/2010 12:03	64	9.9	9.9
08/03/2010 12:04	63	9.7	10.0
08/03/2010 12:05	58	9.5	10.1
08/03/2010 12:06	54	9.8	9.9
08/03/2010 12:07	60	10.0	9.6
08/03/2010 12:08	60	9.9	9.7
08/03/2010 12:09	58	10.1	9.5
08/03/2010 12:10	58	10.0	9.6
08/03/2010 12:11	54	9.7	9.9
08/03/2010 12:12	51	9.7	10.0
08/03/2010 12:13	50	9.9	9.7
08/03/2010 12:14	51	10.2	9.4
08/03/2010 12:15	51	9.5	10.2
08/03/2010 12:16	44	9.8	9.9
08/03/2010 12:17	42	9.5	10.3
08/03/2010 12:18	40	9.2	10.9
08/03/2010 12:19	39	9.5	10.8
08/03/2010 12:20	42	9.4	10.4
08/03/2010 12:21	44	10.0	9.9
08/03/2010 12:22	46	10.3	9.7
08/03/2010 12:23	44	9.8	10.6
08/03/2010 12:24	42	9.7	10.6
08/03/2010 12:25	42	9.4	10.4
08/03/2010 12:26	44	9.5	10.4
Raw Average =	50	9.7	10.0
O2 Corrected Avg. =	64		
Period % Recovery =	100.0	100.0	100.0

Stack Rata Report

RAG

Company: Covanta Huntington, Inc.
Report Name: UNIT #1 STACK RATA



Start of Report: 08/03/2010 12:03
End of Report: 08/03/2010 12:26

Validation: Valid Data Only

	NOxs	SO2s	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G8-C10	G8-C9	G8-C3	G8-C5	G8-C8	G8-C7	G8-C19	
Long Descrip.	U-1 NOx S	U-1 SO2 S	U-1 CO St	U-1 CO Se	U-1 CO2 S	U-1 O2 St	U-1 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/03/2010 12:03	53.3	0	10	10	8.5	10.88	82.0	
08/03/2010 12:04	50.5	0	11	11	8.5	10.98	82.0	
08/03/2010 12:05	66.5	0	9	9	8.4	11.10	82.0	
08/03/2010 12:06	77.0	0	11	11	8.5	10.91	82.0	
08/03/2010 12:07	105.8	0	12	12	8.8	10.61	82.0	
08/03/2010 12:08	123.8	0	10	10	8.8	10.65	82.0	
08/03/2010 12:09	117.8	0	11	11	8.9	10.50	82.0	
08/03/2010 12:10	100.8	0	12	12	8.8	10.63	82.0	
08/03/2010 12:11	84.0	0	9	9	8.6	10.85	82.0	
08/03/2010 12:12	75.3	0	13	13	8.5	10.99	82.0	
08/03/2010 12:13	79.8	0	14	14	8.7	10.70	82.0	
08/03/2010 12:14	82.8	0	11	11	8.9	10.46	83.0	
08/03/2010 12:15	84.3	0	12	12	8.4	11.13	83.0	
08/03/2010 12:16	100.8	0	9	9	8.6	10.84	83.0	
08/03/2010 12:17	89.8	0	8	8	8.3	11.14	82.0	
08/03/2010 12:18	77.3	0	9	9	8.2	11.39	82.0	
08/03/2010 12:19	80.0	0	10	10	8.3	11.24	82.0	
08/03/2010 12:20	66.8	0	11	11	8.3	11.25	82.0	
08/03/2010 12:21	90.3	0	13	13	8.7	10.73	83.0	
08/03/2010 12:22	119.5	0	14	14	9.1	10.33	83.0	
08/03/2010 12:23	118.0	0	9	9	8.7	10.84	83.0	
08/03/2010 12:24	100.8	0	8	8	8.5	10.96	83.0	
08/03/2010 12:25	85.5	0	8	8	8.3	11.23	83.0	
08/03/2010 12:26	72.0	0	9	9	8.4	11.13	82.0	
Raw Average	=	87	0	10.5	10.5	8.5	10.8	82.3
O2 Corrected Avg.	=	121	0	14	14			
Lbs./Hour Avg.	=	31.06	0.00	2.27				
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Economizer Rata Report

R#7

Company: Covanta Huntington, Inc.
 Report Name: UNIT #1 ECON RATA

Start of Report: 08/03/2010 12:39
 End of Report: 08/03/2010 13:02

Validation: Valid Data Only



	SO2e	CO2e	O2e
Group#-Channel#	G8-C6	G8-C2	G8-C1
Long Descrip.	U-1 SO2 E	U-1 CO2 E	U-1 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/03/2010 12:39	64	10.1	9.4
08/03/2010 12:40	61	9.5	10.1
08/03/2010 12:41	56	9.8	9.8
08/03/2010 12:42	57	9.9	9.7
08/03/2010 12:43	70	10.4	9.1
08/03/2010 12:44	76	9.9	9.6
08/03/2010 12:45	73	10.0	9.6
08/03/2010 12:46	70	9.7	9.9
08/03/2010 12:47	74	10.2	9.4
08/03/2010 12:48	79	9.7	9.8
08/03/2010 12:49	77	9.7	9.9
08/03/2010 12:50	81	10.2	9.3
08/03/2010 12:51	78	9.9	9.6
08/03/2010 12:52	76	10.0	9.4
08/03/2010 12:53	72	9.7	9.8
08/03/2010 12:54	68	9.6	9.9
08/03/2010 12:55	64	9.5	10.1
08/03/2010 12:56	69	9.6	9.9
08/03/2010 12:57	65	9.5	10.1
08/03/2010 12:58	65	9.8	9.7
08/03/2010 12:59	62	9.2	10.3
08/03/2010 13:01		8.2	
08/03/2010 13:02	53	<	9.1
			10.3 <
Raw Average =	68	9.7	9.7
O2 Corrected Avg. =	85		
Period % Recovery =	95.7	100.0	95.7

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Stack Rata Report

R#7

Company: Covanta Huntington, Inc.
 Report Name: UNIT #1 STACK RATA



Start of Report: 08/03/2010 12:39
 End of Report: 08/03/2010 13:02

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G8-C10	G8-C9	G8-C3	G8-C5	G8-C8	G8-C7	G8-C19	
Long Descrip.	U-1 NOx S	U-1 SO2 S	U-1 CO St	U-1 CO Se	U-1 CO2 S	U-1 O2 St	U-1 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/03/2010 12:39	98.0	0	13	13	8.9	10.54	81.0	
08/03/2010 12:40	110.0	0	13	13	8.4	11.13	81.0	
08/03/2010 12:41	115.0	0	12	12	8.6	10.86	81.0	
08/03/2010 12:42	101.8	0	10	10	8.7	10.78	81.0	
08/03/2010 12:43	97.5	0	12	12	9.2	10.23	82.0	
08/03/2010 12:44	95.3	0	11	11	8.8	10.68	82.0	
08/03/2010 12:45	90.5	0	11	11	8.8	10.74	82.0	
08/03/2010 12:46	88.3	0	11	11	8.5	10.98	83.0	
08/03/2010 12:47	102.8	0	9	9	8.9	10.55	83.0	
08/03/2010 12:48	93.8	0	8	8	8.6	10.89	83.0	
08/03/2010 12:49	96.8	0	9	9	8.5	10.98	83.0	
08/03/2010 12:50	120.5	0	11	11	8.9	10.45	84.0	
08/03/2010 12:51	111.8	0	9	9	8.8	10.68	84.0	
08/03/2010 12:52	106.5	0	9	9	8.8	10.56	84.0	
08/03/2010 12:53	106.8	0	8	8	8.6	10.90	84.0	
08/03/2010 12:54	106.0	0	7	7	8.5	11.01	84.0	
08/03/2010 12:55	81.5	0	7	7	8.3	11.13	84.0	
08/03/2010 12:56	81.8	0	9	9	8.4	11.01	83.0	
08/03/2010 12:57	65.0	0	10	10	8.3	11.21	84.0	
08/03/2010 12:58	92.8	0	9	9	8.7	10.83	83.0	
08/03/2010 12:59	80.8	0	9	9	8.1	11.41	83.0	
08/03/2010 13:00								
08/03/2010 13:01								
08/03/2010 13:02	63.3	<	0	< 10	< 10	< 8.2	< 11.28	< 82.0
Raw Average	=	95	0	9.8	9.8	8.5	10.8	82.7
O2 Corrected Avg.	=	132	0	13	13			
Lbs./Hour Avg.	=	34.18	0.00	2.14				
Period % Recovery	=	95.7	95.7	95.7	100.0	95.7	100.0	

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Economizer Rata Report

R#8

Company: Covanta Huntington, Inc.
Report Name: UNIT #1 ECON RATA



Start of Report: 08/03/2010 13:17
End of Report: 08/03/2010 13:40 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G8-C6	G8-C2	G8-C1
Long Descrip.	U-1 SO2 E	U-1 CO2 E	U-1 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/03/2010 13:17	67	9.4	10.3
08/03/2010 13:18	69	10.1	9.6
08/03/2010 13:19	87	9.7	9.9
08/03/2010 13:20	83	9.9	9.7
08/03/2010 13:21	89	10.2	9.4
08/03/2010 13:22	117	9.9	9.6
08/03/2010 13:23	117	9.9	9.6
08/03/2010 13:24	101	9.6	10.0
08/03/2010 13:25	97	10.0	9.5
08/03/2010 13:26	115	10.4	9.1
08/03/2010 13:27	120	9.9	9.6
08/03/2010 13:28	120	9.8	9.8
08/03/2010 13:29	126	9.8	9.7
08/03/2010 13:30	113	9.6	10.1
08/03/2010 13:31	129	9.9	9.7
08/03/2010 13:32	155	9.9	9.6
08/03/2010 13:33	138	9.3	10.3
08/03/2010 13:34	152	10.0	9.6
08/03/2010 13:35	150	9.6	9.8
08/03/2010 13:36	127	9.6	10.1
08/03/2010 13:37	135	9.9	9.5
08/03/2010 13:38	104	9.3	10.3
08/03/2010 13:39	101	9.7	9.8
08/03/2010 13:40	101	9.8	9.7
Raw Average =	113	9.8	9.7
O2 Corrected Avg. =	141		
Period % Recovery =	100.0	100.0	100.0

Stack Rata Report

R #8

Company: Covanta Huntington, Inc.
 Report Name: UNIT #1 STACK RATA



Start of Report: 08/03/2010 13:17
 End of Report: 08/03/2010 13:40

Validation: Valid Data Only

	NOxs	SO2S	COLow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G8-C10	G8-C9	G8-C3	G8-C5	G8-C8	G8-C7	G8-C19	
Long Descrip.	U-1 NOx S	U-1 SO2 S	U-1 CO St	U-1 CO Se	U-1 CO2 S	U-1 O2 St	U-1 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/03/2010 13:17	84.5	0	13	13	8.3	11.30	78.0	
08/03/2010 13:18	88.0	0	13	13	8.8	10.65	79.0	
08/03/2010 13:19	74.5	0	14	14	8.6	10.93	79.0	
08/03/2010 13:20	70.5	0	14	14	8.8	10.76	79.0	
08/03/2010 13:21	74.8	0	12	12	9.0	10.50	80.0	
08/03/2010 13:22	75.5	0	9	9	8.8	10.71	80.0	
08/03/2010 13:23	80.3	0	8	8	8.8	10.68	80.0	
08/03/2010 13:24	92.3	0	7	7	8.4	11.08	80.0	
08/03/2010 13:25	102.3	0	8	8	8.8	10.61	81.0	
08/03/2010 13:26	121.5	0	12	12	9.2	10.24	81.0	
08/03/2010 13:27	106.5	0	9	9	8.8	10.75	81.0	
08/03/2010 13:28	74.8	0	10	10	8.6	10.90	81.0	
08/03/2010 13:29	74.3	0	12	12	8.7	10.83	80.0	
08/03/2010 13:30	69.8	0	12	12	8.4	11.11	80.0	
08/03/2010 13:31	70.3	0	14	14	8.7	10.79	81.0	
08/03/2010 13:32	77.8	1	13	13	8.8	10.73	81.0	
08/03/2010 13:33	77.3	2	12	12	8.2	11.39	81.0	
08/03/2010 13:34	86.5	2	17	17	8.7	10.75	81.0	
08/03/2010 13:35	85.3	4	17	17	8.6	10.95	81.0	
08/03/2010 13:36	68.3	4	15	15	8.4	11.13	81.0	
08/03/2010 13:37	79.8	3	20	20	8.8	10.71	80.0	
08/03/2010 13:38	71.8	3	15	15	8.2	11.33	80.0	
08/03/2010 13:39	74.8	2	14	14	8.5	10.94	80.0	
08/03/2010 13:40	87.8	1	14	14	8.7	10.79	80.0	
Raw Average	=	82	0	12.6	12.6	8.6	10.8	80.2
O2 Corrected Avg.	=	113	1	17	17			
Lbs./Hour Avg.	=	28.08	0.43	2.63				
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Economizer Rata Report

R#9

Company: Covanta Huntington, Inc.
Report Name: UNIT #1 ECON RATA



Start of Report: 08/03/2010 13:52
End of Report: 08/03/2010 14:15 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G8-C6	G8-C2	G8-C1
Long Descrip.	U-1 SO2 E	U-1 CO2 E	U-1 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/03/2010 13:52	75	10.0	9.5
08/03/2010 13:53	72	9.6	9.9
08/03/2010 13:54	59	9.6	9.9
08/03/2010 13:55	57	9.2	10.3
08/03/2010 13:56	56	9.7	9.9
08/03/2010 13:57	56	9.7	9.8
08/03/2010 13:58	59	9.9	9.7
08/03/2010 13:59	56	9.6	10.0
08/03/2010 14:01		8.4	
08/03/2010 14:02	48 <	9.3	10.2 <
08/03/2010 14:03	52	9.7	9.9
08/03/2010 14:04	57	9.6	9.9
08/03/2010 14:05	62	9.5	10.0
08/03/2010 14:06	63	9.6	9.9
08/03/2010 14:07	61	9.8	9.8
08/03/2010 14:08	70	9.5	10.0
08/03/2010 14:09	61	9.6	10.0
08/03/2010 14:10	66	10.2	9.4
08/03/2010 14:11	70	9.9	9.6
08/03/2010 14:12	65	10.0	9.5
08/03/2010 14:13	70	10.1	9.5
08/03/2010 14:14	74	10.2	9.3
08/03/2010 14:15	62	10.0	9.6
Raw Average =	62	9.6	9.8
O2 Corrected Avg. =	78		
Period % Recovery =	95.7	100.0	95.7

Stack Rata Report

R#9

Company: Covanta Huntington, Inc.
 Report Name: UNIT #1 STACK RATA



Start of Report: 08/03/2010 13:52
 End of Report: 08/03/2010 14:15

Validation: Valid Data Only

	NOxs	SO2s	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G8-C10	G8-C9	G8-C3	G8-C5	G8-C8	G8-C7	G8-C19	
Long Descrip.	U-1 NOx S	U-1 SO2 S	U-1 CO St	U-1 CO Se	U-1 CO2 S	U-1 O2 St	U-1 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/03/2010 13:52	105.3	0	8	8	8.7	10.65	83.0	
08/03/2010 13:53	106.5	0	11	11	8.5	11.00	83.0	
08/03/2010 13:54	83.8	0	11	11	8.4	11.04	82.0	
08/03/2010 13:55	58.8	0	12	12	8.1	11.39	81.0	
08/03/2010 13:56	74.0	0	12	12	8.5	10.94	81.0	
08/03/2010 13:57	89.3	0	14	14	8.5	10.93	81.0	
08/03/2010 13:58	92.0	0	14	14	8.7	10.80	81.0	
08/03/2010 13:59	86.0	0	17	17	8.5	11.06	80.0	
08/03/2010 14:00								
08/03/2010 14:01								
08/03/2010 14:02	80.0	<	0	<	14	<	8.3	11.26 < 80.0
08/03/2010 14:03	79.0	0	14	14	8.5	10.98	80.0	
08/03/2010 14:04	79.0	0	14	14	8.5	11.00	80.0	
08/03/2010 14:05	71.0	0	12	12	8.3	11.11	80.0	
08/03/2010 14:06	88.0	0	12	12	8.4	11.04	80.0	
08/03/2010 14:07	88.8	0	12	12	8.6	10.90	80.0	
08/03/2010 14:08	79.0	0	13	13	8.4	11.11	80.0	
08/03/2010 14:09	99.0	0	12	12	8.4	11.08	80.0	
08/03/2010 14:10	95.8	0	13	13	8.9	10.54	80.0	
08/03/2010 14:11	90.3	0	14	14	8.8	10.70	81.0	
08/03/2010 14:12	92.8	0	15	15	8.8	10.66	81.0	
08/03/2010 14:13	74.5	0	15	15	8.8	10.63	81.0	
08/03/2010 14:14	96.3	0	11	11	8.9	10.49	81.0	
08/03/2010 14:15	98.0	0	10	10	8.8	10.69	82.0	
Raw Average	=	86	0	12.7	12.7	8.5	10.9	80.7
O2 Corrected Avg.	=	120	0	17	17			
Lbs./Hour Avg.	=	30.35	0.00	2.71				
Period % Recovery	=	95.7	95.7	95.7	100.0	95.7	100.0	

Economizer Rata Report

R#10

Company: Covanta Huntington, Inc.
Report Name: UNIT #1 ECON RATA



Start of Report: 08/03/2010 14:29
End of Report: 08/03/2010 14:52 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G8-C6	G8-C2	G8-C1
Long Descrip.	U-1 SO2 E	U-1 CO2 E	U-1 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/03/2010 14:29	41	9.9	9.6
08/03/2010 14:30	40	9.7	9.8
08/03/2010 14:31	39	9.8	9.8
08/03/2010 14:32	41	10.5	9.0
08/03/2010 14:33	46	10.3	9.1
08/03/2010 14:34	38	9.7	9.9
08/03/2010 14:35	34	9.8	9.8
08/03/2010 14:36	33	9.7	9.8
08/03/2010 14:37	33	9.9	9.6
08/03/2010 14:38	33	10.1	9.4
08/03/2010 14:39	32	9.7	9.8
08/03/2010 14:40	32	10.0	9.7
08/03/2010 14:41	34	10.0	9.6
08/03/2010 14:42	40	10.4	9.1
08/03/2010 14:43	45	10.3	9.2
08/03/2010 14:44	47	10.3	9.2
08/03/2010 14:45	55	9.9	9.7
08/03/2010 14:46	55	9.2	10.3
08/03/2010 14:47	58	9.0	10.9
08/03/2010 14:48	62	9.4	10.8
08/03/2010 14:49	71	10.0	9.6
08/03/2010 14:50	93	9.8	9.9
08/03/2010 14:51	91	9.2	10.4
08/03/2010 14:52	67	9.7	10.0
Raw Average	= 48	9.8	9.7
O2 Corrected Avg.	= 60		
Period % Recovery	= 100.0	100.0	100.0

Stack Rata Report

R#10

Company: Covanta Huntington, Inc.
 Report Name: UNIT #1 STACK RATA



Start of Report: 08/03/2010 14:29
 End of Report: 08/03/2010 14:52

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G8-C10	G8-C9	G8-C3	G8-C5	G8-C8	G8-C7	G8-C19	
Long Descrip.	U-1 NOx S	U-1 SO2 S	U-1 CO St	U-1 CO Se	U-1 CO2 S	U-1 O2 St	U-1 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/03/2010 14:29	109.0	0	14	14	8.8	10.69	81.0	
08/03/2010 14:30	98.3	0	13	13	8.5	10.95	81.0	
08/03/2010 14:31	92.8	0	15	15	8.6	10.89	81.0	
08/03/2010 14:32	97.3	0	16	16	9.2	10.18	82.0	
08/03/2010 14:33	107.3	0	15	15	9.2	10.29	82.0	
08/03/2010 14:34	77.5	0	12	12	8.5	10.96	82.0	
08/03/2010 14:35	80.3	0	13	13	8.6	10.85	81.0	
08/03/2010 14:36	91.3	0	13	13	8.6	10.90	81.0	
08/03/2010 14:37	93.0	0	12	12	8.7	10.71	82.0	
08/03/2010 14:38	96.5	0	13	13	8.9	10.51	82.0	
08/03/2010 14:39	88.0	0	14	14	8.6	10.84	82.0	
08/03/2010 14:40	76.3	0	14	14	8.8	10.61	82.0	
08/03/2010 14:41	72.5	0	14	14	8.8	10.60	83.0	
08/03/2010 14:42	111.8	0	12	12	9.3	10.05	83.0	
08/03/2010 14:43	122.0	0	9	9	9.1	10.20	84.0	
08/03/2010 14:44	119.3	0	8	8	9.2	10.08	84.0	
08/03/2010 14:45	93.8	0	7	7	8.7	10.59	84.0	
08/03/2010 14:46	66.5	0	8	8	8.2	11.16	83.0	
08/03/2010 14:47	54.5	0	9	9	8.0	11.41	83.0	
08/03/2010 14:48	65.0	0	10	10	8.2	11.11	83.0	
08/03/2010 14:49	80.5	0	11	11	8.7	10.55	83.0	
08/03/2010 14:50	91.8	0	11	11	8.6	10.70	83.0	
08/03/2010 14:51	89.8	0	11	11	8.2	11.26	82.0	
08/03/2010 14:52	75.3	0	10	10	8.5	10.86	82.0	
Raw Average	=	89	0	11.8	11.8	8.6	10.7	82.3
O2 Corrected Avg.	=	122	0	16	16			
Lbs./Hour Avg.	=	31.34	0.00	2.51				
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Economizer Rata Report

R#1

Company: Covanta Huntington, Inc.
Report Name: UNIT #2 ECON RATA

Start of Report: 08/04/2010 08:35
End of Report: 08/04/2010 08:58

Validation: Valid Data Only



	SO2e	CO2e	O2e
Group#-Channel#	G25-C6	G25-C2	G25-C1
Long Descrip.	U-2 SO2 E	U-2 CO2 E	U-2 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/04/2010 08:35	32	8.9	10.3
08/04/2010 08:36	31	8.8	10.4
08/04/2010 08:37	33	9.2	10.0
08/04/2010 08:38	36	9.5	9.7
08/04/2010 08:39	37	9.6	9.6
08/04/2010 08:40	38	9.6	9.6
08/04/2010 08:41	41	9.8	9.4
08/04/2010 08:42	40	9.2	10.1
08/04/2010 08:43	39	9.2	9.9
08/04/2010 08:44	43	9.3	9.8
08/04/2010 08:45	48	9.7	9.5
08/04/2010 08:46	52	9.6	9.4
08/04/2010 08:47	50	9.2	10.0
08/04/2010 08:48	52	9.3	9.9
08/04/2010 08:49	50	9.3	9.8
08/04/2010 08:50	48	9.1	10.2
08/04/2010 08:51	45	9.1	10.1
08/04/2010 08:52	49	9.3	9.9
08/04/2010 08:53	43	8.7	10.5
08/04/2010 08:54	40	8.9	10.4
08/04/2010 08:55	42	9.1	10.1
08/04/2010 08:56	44	9.2	10.1
08/04/2010 08:57	40	9.2	10.1
08/04/2010 08:58	39	9.3	9.9
Raw Average	= 42	9.2	9.9
O2 Corrected Avg.	= 53		
Period % Recovery	= 100.0	100.0	100.0

Stack Rata Report

R#1

Company: Covanta Huntington, Inc.
 Report Name: UNIT #2 STACK RATA



Start of Report: 08/04/2010 08:35
 End of Report: 08/04/2010 08:58

Validation: Valid Data Only

	NOxs	SO2s	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G25-C10	G25-C9	G25-C3	G25-C5	G25-C8	G25-C7	G25-C19	
Long Descrip.	U-2 NOx S	U-2 SO2 S	U-2 CO St	U-2 CO Se	U-2 CO2 S	U-2 O2 St	U-2 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/04/2010 08:35	74.5	0	5	5	7.7	11.73	82.4	
08/04/2010 08:36	65.3	0	6	6	7.6	11.78	82.2	
08/04/2010 08:37	85.5	0	8	8	8.0	11.43	82.2	
08/04/2010 08:38	82.5	0	8	8	8.2	11.14	82.4	
08/04/2010 08:39	66.5	0	8	8	8.4	11.05	82.4	
08/04/2010 08:40	71.0	0	8	8	8.3	11.08	82.6	
08/04/2010 08:41	88.8	0	9	9	8.5	10.90	82.8	
08/04/2010 08:42	94.0	0	8	8	8.0	11.46	82.3	
08/04/2010 08:43	85.8	0	7	7	8.0	11.39	82.1	
08/04/2010 08:44	86.8	0	8	8	8.1	11.28	82.3	
08/04/2010 08:45	96.8	0	7	7	8.4	10.96	82.9	
08/04/2010 08:46	87.5	0	6	6	8.4	10.95	83.2	
08/04/2010 08:47	67.8	0	5	5	8.0	11.41	83.2	
08/04/2010 08:48	76.0	0	6	6	8.0	11.34	83.2	
08/04/2010 08:49	83.8	0	6	6	8.1	11.31	83.2	
08/04/2010 08:50	77.3	0	4	4	7.8	11.61	82.7	
08/04/2010 08:51	81.8	0	6	6	7.9	11.53	82.8	
08/04/2010 08:52	86.3	0	7	7	8.1	11.39	82.5	
08/04/2010 08:53	66.3	0	6	6	7.6	11.89	82.1	
08/04/2010 08:54	52.3	0	7	7	7.7	11.79	81.7	
08/04/2010 08:55	52.5	0	11	11	7.9	11.51	81.9	
08/04/2010 08:56	56.3	0	14	14	8.0	11.48	82.0	
08/04/2010 08:57	79.0	0	16	16	8.0	11.50	82.2	
08/04/2010 08:58	95.8	0	10	10	8.1	11.34	82.4	
Raw Average	=	77	0	7.7	7.7	8.0	11.3	82.4
O2 Corrected Avg.	=	113	0	11	11			
Lbs./Hour Avg.	=	29.38	0.00	1.78				
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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Economizer Rata Report

Company: Covanta Huntington, Inc.
Report Name: UNIT #2 ECON RATA



Start of Report: 08/04/2010 09:13
End of Report: 08/04/2010 09:36 **Validation:** Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G25-C6	G25-C2	G25-C1
Long Descrip.	U-2 SO2 E	U-2 CO2 E	U-2 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/04/2010 09:13	41	8.9	10.4
08/04/2010 09:14	41	9.1	10.1
08/04/2010 09:16		7.7	
08/04/2010 09:17	37 <	8.7	10.5 <
08/04/2010 09:18	36	8.8	10.4
08/04/2010 09:19	37	8.8	10.5
08/04/2010 09:20	34	8.9	10.3
08/04/2010 09:21	36	9.0	10.3
08/04/2010 09:22	34	8.7	10.5
08/04/2010 09:23	34	9.2	10.0
08/04/2010 09:24	32	9.1	10.2
08/04/2010 09:25	32	9.4	9.8
08/04/2010 09:26	31	9.8	9.4
08/04/2010 09:27	30	9.5	9.7
08/04/2010 09:28	30	9.4	9.8
08/04/2010 09:29	28	8.9	10.3
08/04/2010 09:30	25	9.0	10.2
08/04/2010 09:31	28	9.6	9.6
08/04/2010 09:32	28	8.9	10.3
08/04/2010 09:33	29	9.3	9.9
08/04/2010 09:34	32	9.3	9.8
08/04/2010 09:35	31	9.6	9.5
08/04/2010 09:36	29	9.1	10.0
Raw Average	= 32	9.0	10.0
O2 Corrected Avg.	= 41		
Period % Recovery	= 95.7	100.0	95.7

Stack Rata Report

R# 2

Company: Covanta Huntington, Inc.
 Report Name: UNIT #2 STACK RATA



Start of Report: 08/04/2010 09:13
 End of Report: 08/04/2010 09:36

Validation: Valid Data Only

	NOxs	SO2s	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G25-C10	G25-C9	G25-C3	G25-C5	G25-C8	G25-C7	G25-C19	
Long Descrip.	U-2 NOx S	U-2 SO2 S	U-2 CO St	U-2 CO Se	U-2 CO2 S	U-2 O2 St	U-2 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/04/2010 09:13	69.8	0	7	7	7.7	11.76	82.6	
08/04/2010 09:14	71.0	0	6	6	8.0	11.55	82.5	
08/04/2010 09:15								
08/04/2010 09:16								
08/04/2010 09:17	58.5	<	0	<	10	<	7.8	11.71
08/04/2010 09:18	64.5	0		10	10		7.8	11.71
08/04/2010 09:19	69.0	0		11	11		7.7	11.83
08/04/2010 09:20	71.5	0		12	12		7.7	11.71
08/04/2010 09:21	59.8	0		12	12		7.8	11.69
08/04/2010 09:22	51.3	0		13	13		7.6	11.85
08/04/2010 09:23-	73.5	0		12	12		7.9	11.51
08/04/2010 09:24	89.8	0		11	11		7.8	11.63
08/04/2010 09:25	93.5	0		13	13		8.1	11.31
08/04/2010 09:26	88.8	0		12	12		8.4	10.95
08/04/2010 09:27	64.8	0		11	11		8.3	11.14
08/04/2010 09:28	63.5	0		12	12		8.1	11.29
08/04/2010 09:29	75.3	0		11	11		7.8	11.68
08/04/2010 09:30	86.0	0		12	12		7.8	11.61
08/04/2010 09:31	115.8	0		12	12		8.3	11.09
08/04/2010 09:32	104.5	0		7	7		7.8	11.66
08/04/2010 09:33	69.8	0		8	8		8.0	11.40
08/04/2010 09:34	65.5	0		10	10		8.0	11.35
08/04/2010 09:35	77.8	0		12	12		8.2	11.09
08/04/2010 09:36	93.0	0		12	12		8.0	11.45
Raw Average	=	76	0	10.7	10.7	7.9	11.5	81.6
O2 Corrected Avg.	=	112	0	15	15			
Lbs./Hour Avg.	=	29.01	0.00	2.48				
Period % Recovery	=	95.7	95.7	95.7	95.7	100.0	95.7	100.0

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Economizer Rata Report

R#3

Company: Covanta Huntington, Inc.
Report Name: UNIT #2 ECON RATA

Start of Report: 08/04/2010 09:52
End of Report: 08/04/2010 10:15

Validation: Valid Data Only



Group#-Channel#	SO2e	CO2e	O2e
Long Descrip.	G25-C6 U-2 SO2 E	G25-C2 U-2 CO2 E	G25-C1 U-2 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/04/2010 09:52	46	9.0	10.0
08/04/2010 09:53	45	9.1	9.8
08/04/2010 09:54	42	9.1	9.9
08/04/2010 09:55	40	9.0	10.1
08/04/2010 09:56	43	9.3	9.6
08/04/2010 09:57	52	9.9	8.9
08/04/2010 09:58	45	8.7	10.3
08/04/2010 09:59	38	8.7	10.4
08/04/2010 10:00	43	9.6	9.4
08/04/2010 10:01	50	9.8	9.2
08/04/2010 10:02	54	9.6	9.4
08/04/2010 10:03	58	9.7	9.3
08/04/2010 10:04	55	9.1	9.9
08/04/2010 10:05	54	9.5	9.5
08/04/2010 10:06	55	9.5	9.6
08/04/2010 10:07	51	9.3	9.8
08/04/2010 10:08	50	9.3	9.8
08/04/2010 10:09	49	9.3	9.8
08/04/2010 10:10	45	9.1	10.0
08/04/2010 10:11	45	8.9	10.2
08/04/2010 10:12	44	9.1	10.1
08/04/2010 10:13	46	9.3	9.8
08/04/2010 10:14	46	9.3	9.8
Raw Average	= 47	9.2	9.7
O2 Corrected Avg.	= 59		
Period % Recovery	= 100.0	100.0	100.0

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Stack Rata Report

R#3

Company: Covanta Huntington, Inc.
 Report Name: UNIT #2 STACK RATA



Start of Report: 08/04/2010 09:52
 End of Report: 08/04/2010 10:15

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G25-C10	G25-C9	G25-C3	G25-C5	G25-C8	G25-C7	G25-C19	
Long Descrip.	U-2 NOx S	U-2 SO2 S	U-2 CO St	U-2 CO Se	U-2 CO2 S	U-2 O2 St	U-2 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/04/2010 09:52	87.0	0	7	7	7.8	11.40	83.9	
08/04/2010 09:53	81.0	0	6	6	7.9	11.31	83.6	
08/04/2010 09:54	83.8	0	7	7	7.9	11.38	83.3	
08/04/2010 09:55	81.5	0	7	7	7.8	11.49	83.2	
08/04/2010 09:56	80.3	0	8	8	8.2	11.08	83.5	
08/04/2010 09:57	80.5	0	7	7	8.5	10.56	83.7	
08/04/2010 09:58	66.0	0	7	7	7.7	11.69	82.9	
08/04/2010 09:59	58.8	0	9	9	7.6	11.71	82.7	
08/04/2010 10:00	86.5	0	13	13	8.4	10.86	83.1	
08/04/2010 10:01	107.0	0	13	13	8.5	10.68	83.6	
08/04/2010 10:02	109.8	0	10	10	8.4	10.90	84.0	
08/04/2010 10:03	89.8	0	10	10	8.4	10.88	84.1	
08/04/2010 10:04	66.8	0	11	11	8.0	11.35	83.9	
08/04/2010 10:05	76.8	0	12	12	8.2	11.03	84.1	
08/04/2010 10:06	90.8	0	12	12	8.1	11.11	84.1	
08/04/2010 10:07	81.0	0	11	11	8.1	11.28	83.9	
08/04/2010 10:08	76.8	0	11	11	8.1	11.26	83.9	
08/04/2010 10:09	80.0	0	10	10	8.0	11.31	83.7	
08/04/2010 10:10	81.3	0	12	12	7.9	11.46	83.4	
08/04/2010 10:11	80.5	0	14	14	7.8	11.64	82.9	
08/04/2010 10:12	85.8	0	16	16	7.9	11.51	82.8	
08/04/2010 10:13	94.3	0	18	18	8.1	11.23	82.7	
08/04/2010 10:14	88.8	0	17	17	8.1	11.23	83.0	
08/04/2010 10:15								
Raw Average	=	83	0	10.7	10.7	8.0	11.2	83.4
O2 Corrected Avg.	=	119	0	15	15			
Lbs./Hour Avg.	=	31.82	0.00	2.50				
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Economizer Rata Report

R#4

Company: Covanta Huntington, Inc.
Report Name: UNIT #2 ECON RATA



Start of Report: 08/04/2010 10:30
End of Report: 08/04/2010 10:53 **Validation:** Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G25-C6	G25-C2	G25-C1
Long Descrip.	U-2 SO2 E	U-2 CO2 E	U-2 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/04/2010 10:30	45	9.0	10.2
08/04/2010 10:31	48	9.2	9.9
08/04/2010 10:32	43	9.2	9.9
08/04/2010 10:33	43	9.1	10.1
08/04/2010 10:34	41	8.9	10.4
08/04/2010 10:35	42	9.0	10.2
08/04/2010 10:36	42	9.1	10.1
08/04/2010 10:37	45	9.4	9.7
08/04/2010 10:38	45	9.1	10.1
08/04/2010 10:39	44	9.2	10.0
08/04/2010 10:40	45	9.1	10.1
08/04/2010 10:41	44	9.0	10.3
08/04/2010 10:42	41	9.2	10.0
08/04/2010 10:43	44	9.5	9.6
08/04/2010 10:44	45	9.4	9.8
08/04/2010 10:45	44	9.5	9.7
08/04/2010 10:46	50	9.7	9.5
08/04/2010 10:47	50	9.6	9.6
08/04/2010 10:48	50	10.0	9.2
08/04/2010 10:49	47	9.5	9.7
08/04/2010 10:50	53	9.7	9.4
08/04/2010 10:51	54	9.5	9.6
08/04/2010 10:52	52	9.4	9.9
08/04/2010 10:53	48	8.8	10.5
Raw Average	= 46	9.3	9.9
O2 Corrected Avg.	= 58		
Period % Recovery	= 100.0	100.0	100.0

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Stack Rata Report

R#4

Company: Covanta Huntington, Inc.
 Report Name: UNIT #2 STACK RATA



Start of Report: 08/04/2010 10:30
 End of Report: 08/04/2010 10:53

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G25-C10	G25-C9	G25-C3	G25-C5	G25-C8	G25-C7	G25-C19	
Long Descrip.	U-2 NOx S	U-2 SO2 S	U-2 CO St	U-2 CO Se	U-2 CO2 S	U-2 O2 St	U-2 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/04/2010 10:30	65.5	0	18	18	7.8	11.60	83.5	
08/04/2010 10:31	62.8	0	20	20	8.0	11.38	83.4	
08/04/2010 10:32	79.3	0	18	18	8.0	11.40	83.4	
08/04/2010 10:33	80.3	0	17	17	7.9	11.59	83.0	
08/04/2010 10:34	58.8	0	17	17	7.7	11.80	82.5	
08/04/2010 10:35	60.8	0	17	17	7.8	11.71	82.1	
08/04/2010 10:36	67.5	0	18	18	7.8	11.59	82.1	
08/04/2010 10:37	81.5	0	19	19	8.2	11.26	82.2	
08/04/2010 10:38	84.5	0	17	17	7.9	11.54	82.0	
08/04/2010 10:39	81.5	0	17	17	8.0	11.51	81.8	
08/04/2010 10:40	72.0	0	14	14	7.9	11.53	81.5	
08/04/2010 10:41	64.5	0	15	15	7.1	12.68	81.0	
08/04/2010 10:42	76.0	0	12	12	6.8	12.83	80.9	
08/04/2010 10:43	90.5	0	13	13	7.8	11.68	81.0	
08/04/2010 10:44	86.3	0	12	12	8.2	11.25	80.9	
08/04/2010 10:45	81.3	0	12	12	8.2	11.16	81.2	
08/04/2010 10:46	89.8	0	15	15	8.4	11.04	81.3	
08/04/2010 10:47	87.3	0	14	14	8.3	11.06	81.8	
08/04/2010 10:48	80.5	0	17	17	8.6	10.81	81.8	
08/04/2010 10:49	75.3	0	14	14	8.2	11.20	81.8	
08/04/2010 10:50	81.8	0	11	11	8.4	11.03	81.8	
08/04/2010 10:51	79.5	0	10	10	8.3	11.16	81.6	
08/04/2010 10:52	78.0	0	10	10	8.1	11.38	81.0	
08/04/2010 10:53	65.8	0	10	10	7.7	11.89	80.4	
Raw Average	=	76	0	14.8	14.8	7.9	11.5	81.8
O2 Corrected Avg.	=	112	0	22	22			
Lbs./Hour Avg.	=	28.94	0.00	3.43				
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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Economizer Rata Report

R #5

Company: Covanta Huntington, Inc.
Report Name: UNIT #2 ECON RATA



Start of Report: 08/04/2010 11:11
End of Report: 08/04/2010 11:34 Validation: Valid Data Only

Group#-Channel#	SO2e	CO2e	O2e
Long Descrip.	G25-C6 U-2 SO2 E	G25-C2 U-2 CO2 E	G25-C1 U-2 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/04/2010 11:11	83	9.8	9.6
08/04/2010 11:12	79	9.3	10.1
08/04/2010 11:13	81	9.1	10.2
08/04/2010 11:14	82	9.2	10.2
08/04/2010 11:16		8.2	
08/04/2010 11:17	73 <	9.2	10.1 <
08/04/2010 11:18	77	9.6	9.6
08/04/2010 11:19	81	9.5	9.7
08/04/2010 11:20	81	9.4	9.8
08/04/2010 11:21	76	9.0	10.3
08/04/2010 11:22	77	9.4	9.8
08/04/2010 11:23	74	9.3	9.9
08/04/2010 11:24	66	9.0	10.2
08/04/2010 11:25	68	9.4	9.8
08/04/2010 11:26	69	9.2	9.9
08/04/2010 11:27	69	9.2	9.9
08/04/2010 11:28	67	9.5	9.6
08/04/2010 11:29	62	9.5	9.5
08/04/2010 11:30	57	8.9	10.1
08/04/2010 11:31	56	8.9	10.1
08/04/2010 11:32	56	9.1	9.9
08/04/2010 11:33	50	8.9	10.0
08/04/2010 11:34	45	8.4	10.4
Raw Average	= 69	9.1	9.9
O2 Corrected Avg.	= 88		
Period % Recovery	= 95.7	100.0	95.7

Stack Rata Report

R#5

Company: Covanta Huntington, Inc.
 Report Name: UNIT #2 STACK RATA



Start of Report: 08/04/2010 11:11
 End of Report: 08/04/2010 11:34

Validation: Valid Data Only

	NOxs	SO2S	COLow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G25-C10	G25-C9	G25-C3	G25-C5	G25-C8	G25-C7	G25-C19	
Long Descrip.	U-2 NOx S	U-2 SO2 S	U-2 CO St	U-2 CO Se	U-2 CO2 S	U-2 O2 St	U-2 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/04/2010 11:11	91.8	0	5	5	8.5	11.06	82.6	
08/04/2010 11:12	69.5	0	5	5	8.1	11.49	82.3	
08/04/2010 11:13	54.0	0	6	6	7.9	11.64	81.8	
08/04/2010 11:14	54.0	0	7	7	8.0	11.58	81.8	
08/04/2010 11:15								
08/04/2010 11:16								
08/04/2010 11:17	58.8	<	0	<	7	<	8.3	11.31 < 82.1
08/04/2010 11:18	62.5	0		7	7	8.3	11.03	82.4
08/04/2010 11:19	77.3	0	7	7	8.3	11.08	82.7	
08/04/2010 11:20	84.0	0	6	6	8.2	11.23	82.4	
08/04/2010 11:21	79.8	0	6	6	7.9	11.59	82.4	
08/04/2010 11:22	82.5	0	9	9	8.2	11.21	82.5	
08/04/2010 11:23	89.8	0	7	7	8.1	11.29	82.3	
08/04/2010 11:24	77.0	0	6	6	7.9	11.59	82.0	
08/04/2010 11:25	76.0	0	7	7	8.1	11.30	81.9	
08/04/2010 11:26	83.0	0	7	7	8.0	11.34	82.1	
08/04/2010 11:27	81.3	0	7	7	8.1	11.31	82.2	
08/04/2010 11:28	83.0	0	7	7	8.2	11.04	82.9	
08/04/2010 11:29	92.5	0	5	5	8.3	10.98	83.1	
08/04/2010 11:30	78.8	0	4	4	7.8	11.48	83.0	
08/04/2010 11:31	74.0	0	5	5	7.7	11.50	83.1	
08/04/2010 11:32	72.5	0	6	6	7.9	11.31	83.3	
08/04/2010 11:33	80.0	0	5	5	7.8	11.36	83.2	
08/04/2010 11:34	70.3	0	4	4	7.4	11.78	83.0	
Raw Average	= 76	0	6.1	6.1	8.0	11.3	82.4	
O2 Corrected Avg.	= 110	0	8	8				
Lbs./Hour Avg.	= 28.82	0.00	1.41					
Period % Recovery	= 95.7	95.7	95.7	95.7	100.0	95.7	100.0	

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Economizer Rata Report

R #6

Company: Covanta Huntington, Inc.
Report Name: UNIT #2 ECON RATA



Start of Report: 08/04/2010 11:52
End of Report: 08/04/2010 12:15 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G25-C6	G25-C2	G25-C1
Long Descrip.	U-2 SO2 E	U-2 CO2 E	U-2 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/04/2010 11:52	18	8.5	10.6
08/04/2010 11:53	21	8.7	10.4
08/04/2010 11:54	27	8.6	10.5
08/04/2010 11:55	42	8.9	10.2
08/04/2010 11:56	66	8.8	10.3
08/04/2010 11:57	63	8.8	10.3
08/04/2010 11:58	49	8.8	10.3
08/04/2010 11:59	37	8.8	10.4
08/04/2010 12:00	41	8.6	10.5
08/04/2010 12:01	44	9.0	10.0
08/04/2010 12:02	51	9.2	9.8
08/04/2010 12:03	55	8.9	10.2
08/04/2010 12:04	47	8.8	10.3
08/04/2010 12:05	47	9.2	9.8
08/04/2010 12:06	49	9.4	9.6
08/04/2010 12:07	53	9.7	9.3
08/04/2010 12:08	52	9.7	9.3
08/04/2010 12:09	60	10.4	8.6
08/04/2010 12:10	55	9.3	9.8
08/04/2010 12:11	51	9.1	10.0
08/04/2010 12:12	49	8.9	10.2
08/04/2010 12:13	53	9.6	9.5
08/04/2010 12:14	64	10.5	8.5
Raw Average	= 47	9.1	9.9
O2 Corrected Avg.	= 60		
Period % Recovery	= 100.0	100.0	100.0

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Stack Rata Report

R#6

Company: Covanta Huntington, Inc.
 Report Name: UNIT #2 STACK RATA



Start of Report: 08/04/2010 11:52
 End of Report: 08/04/2010 12:15

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G25-C10	G25-C9	G25-C3	G25-C5	G25-C8	G25-C7	G25-C19	
Long Descrip.	U-2 NOx S	U-2 SO2 S	U-2 CO St	U-2 CO Se	U-2 CO2 S	U-2 O2 St	U-2 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/04/2010 11:52	94.3	0	16	16	7.4	11.95	75.3	
08/04/2010 11:53	92.8	0	23	23	7.5	11.81	74.9	
08/04/2010 11:54	82.3	0	18	18	7.5	11.90	74.5	
08/04/2010 11:55	82.8	0	18	18	7.7	11.64	74.5	
08/04/2010 11:56	87.8	0	17	17	7.6	11.70	74.3	
08/04/2010 11:57	78.0	0	17	17	7.7	11.69	74.3	
08/04/2010 11:58	76.3	0	16	16	7.7	11.70	73.9	
08/04/2010 11:59	84.3	0	20	20	7.6	11.81	73.6	
08/04/2010 12:00	87.0	0	14	14	7.4	11.90	73.4	
08/04/2010 12:01	76.0	0	14	14	7.8	11.51	73.8	
08/04/2010 12:02	69.5	0	15	15	7.9	11.38	74.2	
08/04/2010 12:03	82.3	0	15	15	7.7	11.69	74.3	
08/04/2010 12:04	90.5	0	14	14	7.6	11.71	74.9	
08/04/2010 12:05	106.8	0	17	17	8.0	11.26	75.9	
08/04/2010 12:06	99.3	0	13	13	8.1	11.10	77.0	
08/04/2010 12:07	73.0	0	15	15	8.4	10.89	78.0	
08/04/2010 12:08	73.3	0	12	12	8.4	10.83	79.7	
08/04/2010 12:09	99.5	0	12	12	8.9	10.30	81.0	
08/04/2010 12:10	93.3	0	10	10	8.1	11.30	81.1	
08/04/2010 12:11	88.5	0	11	11	7.9	11.51	80.9	
08/04/2010 12:12	74.5	0	11	11	7.8	11.64	80.9	
08/04/2010 12:13	71.8	0	11	11	8.3	11.00	81.8	
08/04/2010 12:14	83.8	0	8	8	9.0	10.26	82.6	
08/04/2010 12:15								
Raw Average	=	84	0	14.6	14.6	7.9	11.4	76.9
O2 Corrected Avg.	=	124	0	21	21			
Lbs./Hour Avg.	=	30.40	0.00	3.20				
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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Economizer Rata Report

Company: Covanta Huntington, Inc.
Report Name: UNIT #2 ECON RATA



Start of Report: 08/04/2010 12:28
End of Report: 08/04/2010 12:51 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G25-C6	G25-C2	G25-C1
Long Descrip.	U-2 SO2 E	U-2 CO2 E	U-2 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/04/2010 12:28	64	9.4	9.7
08/04/2010 12:29	60	9.6	9.4
08/04/2010 12:30	54	9.2	9.9
08/04/2010 12:31	52	9.2	9.9
08/04/2010 12:32	51	9.5	9.6
08/04/2010 12:33	57	9.9	9.1
08/04/2010 12:34	55	9.5	9.5
08/04/2010 12:35	53	9.3	9.9
08/04/2010 12:36	53	9.0	10.1
08/04/2010 12:37	58	9.3	9.9
08/04/2010 12:38	56	9.0	10.2
08/04/2010 12:39	58	9.0	10.2
08/04/2010 12:40	58	8.9	10.2
08/04/2010 12:41	54	8.8	10.3
08/04/2010 12:42	53	9.0	10.1
08/04/2010 12:43	48	8.7	10.5
08/04/2010 12:44	47	8.8	10.3
08/04/2010 12:45	48	9.0	10.1
08/04/2010 12:46	43	8.8	10.3
08/04/2010 12:47	40	8.9	10.2
08/04/2010 12:48	39	9.1	10.0
08/04/2010 12:49	37	9.0	10.1
08/04/2010 12:50	36	9.2	9.8
08/04/2010 12:51	37	9.5	9.6
Raw Average =	50	9.1	9.9
O2 Corrected Avg. =	64		
Period % Recovery =	100.0	100.0	100.0

Stack Rata Report

Company: Covanta Huntington, Inc.
Report Name: UNIT #2 STACK RATA



Start of Report: 08/04/2010 12:28
End of Report: 08/04/2010 12:51

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G25-C10	G25-C9	G25-C3	G25-C5	G25-C8	G25-C7	G25-C19	
Long Descrip.	U-2 NOx S	U-2 SO2 S	U-2 CO St	U-2 CO Se	U-2 CO2 S	U-2 O2 St	U-2 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/04/2010 12:28	79.5	0	10	10	8.2	11.13	81.4	
08/04/2010 12:29	78.3	0	9	9	8.3	10.96	81.4	
08/04/2010 12:30	70.5	0	8	8	8.0	11.39	81.3	
08/04/2010 12:31	68.0	0	11	11	8.0	11.39	81.4	
08/04/2010 12:32	86.8	0	10	10	8.2	11.09	82.0	
08/04/2010 12:33	105.5	0	10	10	8.6	10.70	82.5	
08/04/2010 12:34	88.5	0	9	9	8.3	11.03	83.2	
08/04/2010 12:35	67.0	0	10	10	8.0	11.34	82.6	
08/04/2010 12:36	57.5	0	12	12	7.9	11.50	82.6	
08/04/2010 12:37	82.5	0	13	13	8.1	11.34	82.5	
08/04/2010 12:38	70.0	0	12	12	7.8	11.61	82.5	
08/04/2010 12:39	59.8	0	14	14	7.8	11.60	82.6	
08/04/2010 12:40	60.5	0	14	14	7.8	11.59	82.5	
08/04/2010 12:41	63.0	0	14	14	7.8	11.68	82.4	
08/04/2010 12:42	62.8	0	16	16	7.8	11.54	82.4	
08/04/2010 12:43	54.3	0	15	15	7.6	11.81	82.0	
08/04/2010 12:44	57.5	0	15	15	7.7	11.70	81.9	
08/04/2010 12:45	64.0	0	17	17	7.8	11.58	81.7	
08/04/2010 12:46	61.0	0	20	20	7.7	11.71	81.5	
08/04/2010 12:47	82.8	0	16	16	7.6	11.71	81.2	
08/04/2010 12:48	91.8	0	15	15	7.9	11.51	81.2	
08/04/2010 12:49	87.0	0	14	14	7.8	11.55	81.4	
08/04/2010 12:50	91.3	0	14	14	8.0	11.33	81.5	
08/04/2010 12:51	85.3	0	11	11	8.2	11.08	82.0	
Raw Average	=	73	0	12.8	12.8	7.9	11.4	81.9
O2 Corrected Avg.	=	108	0	18	18			
Lbs./Hour Avg.	=	28.14	0.00	2.98				
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Economizer Rata Report

RAG

Company: Covanta Huntington, Inc.
Report Name: UNIT #2 ECON RATA



Start of Report: 08/04/2010 13:13
End of Report: 08/04/2010 13:36 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G25-C6	G25-C2	G25-C1
Long Descrip.	U-2 SO2 E	U-2 CO2 E	U-2 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/04/2010 13:13	45	8.5	10.7
08/04/2010 13:14	47	8.9	10.3
08/04/2010 13:16		7.7	
08/04/2010 13:17	57 <	9.4	9.4 <
08/04/2010 13:18	55	9.7	9.5
08/04/2010 13:19	52	9.5	9.6
08/04/2010 13:20	52	9.6	9.6
08/04/2010 13:21	49	9.2	10.0
08/04/2010 13:22	46	9.2	10.0
08/04/2010 13:23	45	9.0	10.2
08/04/2010 13:24	42	9.5	9.7
08/04/2010 13:25	42	9.3	9.9
08/04/2010 13:26	40	9.7	9.5
08/04/2010 13:27	37	8.9	10.3
08/04/2010 13:28	33	8.9	10.3
08/04/2010 13:29	36	9.9	9.2
08/04/2010 13:30	39	9.7	9.5
08/04/2010 13:31	32	8.8	10.4
08/04/2010 13:32	31	9.1	10.1
08/04/2010 13:33	33	8.8	10.4
08/04/2010 13:34	37	9.5	9.7
08/04/2010 13:35	39	9.2	9.9
08/04/2010 13:36	37	9.1	10.1
Raw Average	= 42	9.1	9.9
O2 Corrected Avg.	= 53		
Period % Recovery	= 95.7	100.0	95.7

Stack Rata Report

R#9



Company: Covanta Huntington, Inc.
 Report Name: UNIT #2 STACK RATA

Start of Report: 08/04/2010 13:13
 End of Report: 08/04/2010 13:36

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G25-C10	G25-C9	G25-C3	G25-C5	G25-C8	G25-C7	G25-C19	
Long Descrip.	U-2 NOx S	U-2 SO2 S	U-2 CO St	U-2 CO Se	U-2 CO2 S	U-2 O2 St	U-2 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/04/2010 13:13	92.8	0	14	14	7.5	12.06	78.1	
08/04/2010 13:14	79.8	0	17	17	7.7	11.74	78.1	
08/04/2010 13:15								
08/04/2010 13:16								
08/04/2010 13:17	63.8	<	0	<	21	<	8.3	10.88
08/04/2010 13:18	70.3	0	17	17	8.5	10.88	80.3	
08/04/2010 13:19	95.3	0	12	12	8.3	11.10	80.9	
08/04/2010 13:20	99.3	0	9	9	8.3	11.10	81.4	
08/04/2010 13:21	94.8	0	10	10	8.1	11.36	81.6	
08/04/2010 13:22	102.3	0	10	10	8.0	11.41	81.8	
08/04/2010 13:23	92.8	0	11	11	7.9	11.53	81.9	
08/04/2010 13:24	89.8	0	12	12	8.2	11.13	82.4	
08/04/2010 13:25	90.3	0	10	10	8.2	11.28	82.8	
08/04/2010 13:26	113.3	0	9	9	8.4	10.94	83.2	
08/04/2010 13:27	86.5	0	11	11	7.8	11.73	82.5	
08/04/2010 13:28	82.5	0	9	9	7.7	11.68	82.6	
08/04/2010 13:29	95.5	0	11	11	8.6	10.75	83.4	
08/04/2010 13:30	89.8	0	8	8	8.4	10.99	83.3	
08/04/2010 13:31	63.8	0	5	5	7.7	11.78	82.7	
08/04/2010 13:32	77.3	0	7	7	7.9	11.59	82.3	
08/04/2010 13:33	73.5	0	6	6	7.5	11.98	82.2	
08/04/2010 13:34	68.8	0	8	8	8.0	11.36	82.6	
08/04/2010 13:35	76.8	0	8	8	7.8	11.66	82.6	
08/04/2010 13:36	75.5	0	7	7	7.9	11.51	82.7	
Raw Average	=	85	0	10.5	10.5	7.9	11.3	81.4
O2 Corrected Avg.	=	124	0	15	15			
Lbs./Hour Avg.	=	32.06	0.00	2.41				
Period % Recovery	=	95.7	95.7	95.7	100.0	95.7	100.0	

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Economizer Rata Report

R#9

Company: Covanta Huntington, Inc.
Report Name: UNIT #2 ECON RATA



Start of Report: 08/04/2010 13:50
End of Report: 08/04/2010 14:13 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G25-C6	G25-C2	G25-C1
Long Descrip.	U-2 SO2 E	U-2 CO2 E	U-2 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/04/2010 13:50	82	9.7	9.4
08/04/2010 13:51	66	8.7	10.6
08/04/2010 13:52	63	9.1	10.2
08/04/2010 13:53	68	9.8	9.4
08/04/2010 13:54	65	9.8	9.4
08/04/2010 13:55	61	9.8	9.3
08/04/2010 13:56	58	9.5	9.6
08/04/2010 13:57	57	9.7	9.4
08/04/2010 13:58	60	10.4	8.7
08/04/2010 13:59	51	9.6	9.6
08/04/2010 14:00	45	9.5	9.7
08/04/2010 14:01	42	9.2	10.1
08/04/2010 14:02	40	9.1	10.2
08/04/2010 14:03	40	9.5	9.8
08/04/2010 14:04	43	10.0	9.2
08/04/2010 14:05	45	10.0	9.1
08/04/2010 14:06	44	10.0	9.1
08/04/2010 14:07	40	9.3	9.9
08/04/2010 14:08	40	9.5	9.7
08/04/2010 14:09	40	9.6	9.6
08/04/2010 14:10	38	9.3	9.8
08/04/2010 14:11	35	9.2	9.9
08/04/2010 14:12	37	9.4	9.8
08/04/2010 14:13	36	9.0	10.1
Raw Average =	49	9.5	9.6
O2 Corrected Avg. =	61		
Period % Recovery =	100.0	100.0	100.0

Stack Rata Report

R#9

Company: Covanta Huntington, Inc.
 Report Name: UNIT #2 STACK RATA



Start of Report: 08/04/2010 13:50
 End of Report: 08/04/2010 14:13

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam Flow
Group#-Channel#	G25-C10	G25-C9	G25-C3	G25-C5	G25-C8	G25-C7	G25-C19
Long Descrip.	U-2 NOx S	U-2 SO2 S	U-2 CO St	U-2 CO Se	U-2 CO2 S	U-2 O2 St	U-2 Steam
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100
08/04/2010 13:50	102.8	0	10	10	8.4	11.00	80.7
08/04/2010 13:51	85.0	0	10	10	7.6	11.89	80.0
08/04/2010 13:52	76.5	0	10	10	7.8	11.61	79.8
08/04/2010 13:53	69.3	0	12	12	8.5	10.89	80.1
08/04/2010 13:54	75.5	0	11	11	8.5	10.84	80.5
08/04/2010 13:55	108.0	0	9	9	8.5	10.88	80.8
08/04/2010 13:56	112.3	0	9	9	8.3	11.15	80.9
08/04/2010 13:57	88.5	0	9	9	8.4	10.93	81.7
08/04/2010 13:58	95.5	0	8	8	8.9	10.39	82.3
08/04/2010 13:59	82.8	0	8	8	8.3	11.16	82.3
08/04/2010 14:00	73.3	0	8	8	8.2	11.24	81.8
08/04/2010 14:01	61.8	0	11	11	8.0	11.54	81.2
08/04/2010 14:02	68.5	0	11	11	7.9	11.60	80.9
08/04/2010 14:03	90.0	0	11	11	8.2	11.26	81.2
08/04/2010 14:04	99.5	0	11	11	8.6	10.79	82.0
08/04/2010 14:05	104.8	0	10	10	8.7	10.71	82.8
08/04/2010 14:06	89.8	0	9	9	8.7	10.76	83.2
08/04/2010 14:07	72.3	0	8	8	8.1	11.36	83.3
08/04/2010 14:08	81.8	0	9	9	8.2	11.15	83.5
08/04/2010 14:09	69.5	0	9	9	8.3	11.06	83.7
08/04/2010 14:10	63.3	0	8	8	8.1	11.28	83.7
08/04/2010 14:11	69.0	0	7	7	8.0	11.35	83.8
08/04/2010 14:12	75.3	0	6	6	8.1	11.28	83.9
08/04/2010 14:13	61.0	0	6	6	7.8	11.58	83.6
Raw Average	=	82	0	9.1	9.1	8.2	81.9
O2 Corrected Avg.	=	117	0	13	13		
Lbs./Hour Avg.	=	30.19	0.00	2.04			
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0

Economizer Rata Report

R#10

Company: Covanta Huntington, Inc.
Report Name: UNIT #2 ECON RATA



Start of Report: 08/04/2010 14:27
End of Report: 08/04/2010 14:50 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G25-C6	G25-C2	G25-C1
Long Descrip.	U-2 SO2 E	U-2 CO2 E	U-2 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/04/2010 14:27	28	9.4	9.8
08/04/2010 14:28	23	8.7	10.5
08/04/2010 14:29	24	9.0	10.2
08/04/2010 14:30	22	8.7	10.5
08/04/2010 14:31	23	9.1	10.1
08/04/2010 14:32	28	9.6	9.5
08/04/2010 14:33	34	10.0	9.0
08/04/2010 14:34	33	9.7	9.4
08/04/2010 14:35	30	9.3	9.8
08/04/2010 14:36	35	9.8	9.3
08/04/2010 14:37	38	9.8	9.3
08/04/2010 14:38	39	9.8	9.3
08/04/2010 14:39	39	9.7	9.3
08/04/2010 14:40	33	9.1	10.0
08/04/2010 14:41	40	9.9	9.1
08/04/2010 14:42	34	9.0	10.1
08/04/2010 14:43	36	9.4	9.6
08/04/2010 14:44	37	9.7	9.4
08/04/2010 14:45	41	9.5	9.6
08/04/2010 14:46	39	9.6	9.4
08/04/2010 14:47	38	9.3	9.8
08/04/2010 14:48	34	8.7	10.4
08/04/2010 14:49	37	9.2	9.8
08/04/2010 14:50	41	9.4	9.7
Raw Average	= 33	9.3	9.7
O2 Corrected Avg.	= 41		
Period % Recovery	= 100.0	100.0	100.0

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Stack Rata Report

R#10

Company: Covanta Huntington, Inc.
 Report Name: UNIT #2 STACK RATA



Start of Report: 08/04/2010 14:27
 End of Report: 08/04/2010 14:50

Validation: Valid Data Only

	NOxs	SO2s	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G25-C10	G25-C9	G25-C3	G25-C5	G25-C8	G25-C7	G25-C19	
Long Descrip.	U-2 NOx S	U-2 SO2 S	U-2 CO St	U-2 CO Se	U-2 CO2 S	U-2 O2 St	U-2 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/04/2010 14:27	82.3	0	13	13	8.1	11.33	82.5	
08/04/2010 14:28	68.0	0	10	10	7.6	11.88	81.9	
08/04/2010 14:29	70.3	0	11	11	7.8	11.66	81.3	
08/04/2010 14:30	68.8	0	16	16	7.5	11.94	80.5	
08/04/2010 14:31	79.3	0	13	13	7.8	11.59	80.4	
08/04/2010 14:32	85.8	0	12	12	8.2	11.08	80.9	
08/04/2010 14:33	85.3	0	10	10	8.6	10.64	81.7	
08/04/2010 14:34	96.5	0	9	9	8.4	10.95	81.8	
08/04/2010 14:35	103.5	0	9	9	8.1	11.28	82.0	
08/04/2010 14:36	113.5	0	11	11	8.5	10.88	82.6	
08/04/2010 14:37	96.8	0	9	9	8.5	10.85	83.1	
08/04/2010 14:38	78.5	0	11	11	8.5	10.81	83.5	
08/04/2010 14:39	62.5	0	11	11	8.4	10.90	83.2	
08/04/2010 14:40	56.0	0	10	10	8.0	11.43	83.2	
08/04/2010 14:41	96.8	0	11	11	8.5	10.80	83.2	
08/04/2010 14:42	91.8	0	9	9	7.8	11.53	83.1	
08/04/2010 14:43	87.8	0	9	9	8.2	11.15	83.4	
08/04/2010 14:44	85.3	0	8	8	8.4	10.93	83.7	
08/04/2010 14:45	85.0	0	8	8	8.2	11.11	83.8	
08/04/2010 14:46	97.3	0	8	8	8.3	10.93	84.1	
08/04/2010 14:47	93.8	0	6	6	8.0	11.30	83.5	
08/04/2010 14:48	63.8	0	5	5	7.6	11.75	83.1	
08/04/2010 14:49	75.5	0	8	8	8.0	11.29	83.2	
08/04/2010 14:50	80.0	0	8	8	8.1	11.16	83.4	
Raw Average	=	83	0	9.7	9.7	8.1	11.2	82.6
O2 Corrected Avg.	=	119	0	14	14			
Lbs./Hour Avg.	=	31.33	0.00	2.23				
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Economizer Rata Report

Company: Covanta Huntington, Inc.
 Report Name: UNIT #3 ECON RATA



Start of Report: 08/06/2010 07:30
 End of Report: 08/06/2010 07:53 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G38-C6	G38-C2	G38-C1
Long Descrip.	U-3 SO2 E	U-3 CO2 E	U-3 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/06/2010 07:31		9.0	
08/06/2010 07:32	67	<	10.6 <
08/06/2010 07:33	73	9.3	10.2
08/06/2010 07:34	80	9.6	9.8
08/06/2010 07:35	81	9.6	9.8
08/06/2010 07:36	78	9.2	10.4
08/06/2010 07:37	75	9.2	10.3
08/06/2010 07:38	75	9.3	10.2
08/06/2010 07:39	85	9.5	10.0
08/06/2010 07:40	83	9.1	10.4
08/06/2010 07:41	84	9.2	10.3
08/06/2010 07:42	96	9.4	10.0
08/06/2010 07:43	89	9.6	9.8
08/06/2010 07:44	81	9.2	10.2
08/06/2010 07:45	83	9.2	10.4
08/06/2010 07:46	84	9.3	10.2
08/06/2010 07:47	81	9.1	10.4
08/06/2010 07:48	83	9.2	10.3
08/06/2010 07:49	90	9.6	9.8
08/06/2010 07:50	87	9.5	10.0
08/06/2010 07:51	85	9.3	10.2
08/06/2010 07:52	87	9.2	10.2
08/06/2010 07:53	83	8.9	10.6
Raw Average =	82	9.2	10.1
O2 Corrected Avg. =	106		
Period % Recovery =	95.7	100.0	95.7

Stack Rata Report

Company: Covanta Huntington, Inc.
 Report Name: UNIT #3 STACK RATA



Start of Report: 08/06/2010 07:30
 End of Report: 08/06/2010 07:53

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G38-C10	G38-C9	G38-C3	G38-C5	G38-C8	G38-C7	G38-C19	
Long Descrip.	U-3 NOx S	U-3 SO2 S	U-3 CO St	U-3 CO Se	U-3 CO2 S	U-3 O2 St	U-3 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/06/2010 07:30								
08/06/2010 07:31								
08/06/2010 07:32	111.0	<	0	<	17	<	8.0	11.63
08/06/2010 07:33	98.3	0			19	19	8.1	11.41
08/06/2010 07:34	85.5	0			21	21	8.6	11.00
08/06/2010 07:35	78.8	0			22	22	8.6	10.98
08/06/2010 07:36	85.5	0			20	20	8.1	11.41
08/06/2010 07:37	95.5	0			35	35	8.2	11.34
08/06/2010 07:38	79.0	0			22	22	8.2	11.30
08/06/2010 07:39	73.8	0			23	23	8.4	11.05
08/06/2010 07:40	75.5	0			21	21	8.1	11.41
08/06/2010 07:41	85.0	0			21	21	8.0	11.39
08/06/2010 07:42	89.0	0			18	18	8.4	11.08
08/06/2010 07:43	90.8	0			16	16	8.4	11.00
08/06/2010 07:44	78.5	0			14	14	8.3	11.23
08/06/2010 07:45	66.3	0			15	15	8.1	11.43
08/06/2010 07:46	76.8	0			22	22	8.2	11.31
08/06/2010 07:47	74.3	0			17	17	8.0	11.49
08/06/2010 07:48	71.0	0			20	20	8.1	11.40
08/06/2010 07:49	70.8	0			24	24	8.4	11.00
08/06/2010 07:50	77.5	0			23	23	8.4	11.04
08/06/2010 07:51	81.3	0			17	17	8.2	11.24
08/06/2010 07:52	71.5	0			17	17	8.2	11.28
08/06/2010 07:53	66.3	0			15	15	7.9	11.60
Raw Average	=	81	0	19.9	19.9	8.1	11.2	81.6
O2 Corrected Avg.	=	116	0	28	28			
Lbs./Hour Avg.	=	29.84	0.00	4.47				
Period % Recovery	=	95.7	95.7	95.7	95.7	100.0	95.7	100.0

Economizer Rata Report

R#2

Company: Covanta Huntington, Inc.
Report Name: UNIT #3 ECON RATA

Start of Report: 08/06/2010 08:09
End of Report: 08/06/2010 08:32

Validation: Valid Data Only



Group#-Channel#	SO2e	CO2e	O2e
Long Descrip.	G38-C6 U-3 SO2 E	G38-C2 U-3 CO2 E	G38-C1 U-3 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/06/2010 08:09	103	8.6	10.9
08/06/2010 08:10	111	9.2	10.3
08/06/2010 08:11	109	8.8	10.6
08/06/2010 08:12	104	8.9	10.7
08/06/2010 08:13	108	9.1	10.4
08/06/2010 08:14	114	9.1	10.3
08/06/2010 08:15	113	9.0	10.5
08/06/2010 08:16	117	9.2	10.3
08/06/2010 08:17	113	8.9	10.5
08/06/2010 08:18	120	8.8	10.7
08/06/2010 08:19	122	9.1	10.4
08/06/2010 08:20	120	8.9	10.5
08/06/2010 08:21	117	9.1	10.4
08/06/2010 08:22	126	9.3	10.1
08/06/2010 08:23	137	9.4	10.0
08/06/2010 08:24	133	9.2	10.2
08/06/2010 08:25	137	9.2	10.2
08/06/2010 08:26	140	9.2	10.3
08/06/2010 08:27	135	9.3	10.1
08/06/2010 08:28	138	9.2	10.3
08/06/2010 08:29	124	9.1	10.4
08/06/2010 08:31		8.7	
08/06/2010 08:32	117	<	9.5
Raw Average	=	120	9.0
O2 Corrected Avg.	=	159	10.3
Period % Recovery	=	95.7	100.0
			95.7

Stack Rata Report

R#2

Company: Covanta Huntington, Inc.
 Report Name: UNIT #3 STACK RATA



Start of Report: 08/06/2010 08:09
 End of Report: 08/06/2010 08:32

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G38-C10	G38-C9	G38-C3	G38-C5	G38-C8	G38-C7	G38-C19	
Long Descrip.	U-3 NOx S	U-3 SO2 S	U-3 CO St	U-3 CO Se	U-3 CO2 S	U-3 O2 St	U-3 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/06/2010 08:09	57.5	0	26	26	7.7	11.89	83.0	
08/06/2010 08:10	64.8	0	25	25	8.0	11.44	83.0	
08/06/2010 08:11	63.0	0	23	23	7.9	11.61	82.0	
08/06/2010 08:12	59.8	0	25	25	7.9	11.73	82.0	
08/06/2010 08:13	50.3	0	33	33	8.0	11.49	82.0	
08/06/2010 08:14	67.8	0	33	33	8.1	11.38	82.0	
08/06/2010 08:15	86.0	0	30	30	8.1	11.48	82.0	
08/06/2010 08:16	95.8	0	29	29	8.1	11.39	82.0	
08/06/2010 08:17	81.0	0	27	27	8.1	11.46	81.0	
08/06/2010 08:18	60.8	0	27	27	7.8	11.68	81.0	
08/06/2010 08:19	65.8	0	30	30	8.0	11.45	81.0	
08/06/2010 08:20	72.3	0	25	25	8.0	11.44	81.0	
08/06/2010 08:21	71.3	0	28	28	8.0	11.46	81.0	
08/06/2010 08:22	84.8	0	28	28	8.2	11.19	81.0	
08/06/2010 08:23	88.3	0	28	28	8.4	11.03	82.0	
08/06/2010 08:24	88.0	0	27	27	8.3	11.19	81.0	
08/06/2010 08:25	83.3	0	29	29	8.2	11.28	81.0	
08/06/2010 08:26	68.3	0	30	30	8.1	11.33	81.0	
08/06/2010 08:27	72.5	0	27	27	8.3	11.14	81.0	
08/06/2010 08:28	80.5	0	30	30	8.2	11.23	80.0	
08/06/2010 08:29	78.0	0	30	30	8.0	11.46	80.0	
08/06/2010 08:30								
08/06/2010 08:31								
08/06/2010 08:32	79.8	<	0	<	32	<	32	<
					8.7		10.98	<
							81.0	
Raw Average	=	73	0	28.2	28.2	8.0	11.4	81.3
O2 Corrected Avg.	=	107	0	41	41			
Lbs./Hour Avg.	=	27.39	0.00	6.40				
Period % Recovery	=	95.7	95.7	95.7	100.0	95.7	100.0	

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Economizer Rata Report

RF3

Company: Covanta Huntington, Inc.
Report Name: UNIT #3 ECON RATA

Start of Report: 08/06/2010 08:44
End of Report: 08/06/2010 09:07

Validation: Valid Data Only



	SO2e	CO2e	O2e
Group#-Channel#	G38-C6	G38-C2	G38-C1
Long Descrip.	U-3 SO2 E	U-3 CO2 E	U-3 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/06/2010 08:44	165	9.3	10.1
08/06/2010 08:45	181	9.0	10.5
08/06/2010 08:46	198	9.0	10.5
08/06/2010 08:47	202	8.8	10.7
08/06/2010 08:48	227	9.1	10.4
08/06/2010 08:49	232	8.7	10.8
08/06/2010 08:50	230	8.8	10.7
08/06/2010 08:51	229	8.8	10.6
08/06/2010 08:52	237	9.0	10.4
08/06/2010 08:53	256	9.5	10.0
08/06/2010 08:54	247	9.5	9.9
08/06/2010 08:55	216	9.1	10.2
08/06/2010 08:56	218	9.2	10.2
08/06/2010 08:57	215	8.9	10.5
08/06/2010 08:58	198	8.8	10.7
08/06/2010 08:59	187	8.5	11.0
08/06/2010 09:00	206	8.7	10.8
08/06/2010 09:01	221	9.1	10.3
08/06/2010 09:02	206	8.7	10.7
08/06/2010 09:03	216	8.5	10.9
08/06/2010 09:04	208	8.8	10.7
08/06/2010 09:05	204	8.8	10.5
08/06/2010 09:06	215	9.1	10.2
08/06/2010 09:07	202	9.1	10.3
Raw Average	= 213	8.9	10.4
O2 Corrected Avg.	= 284		
Period % Recovery	= 100.0	100.0	100.0

Stack Rata Report

R#3

Company: Covanta Huntington, Inc.
 Report Name: UNIT #3 STACK RATA



Start of Report: 08/06/2010 08:44
 End of Report: 08/06/2010 09:07

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G38-C10	G38-C9	G38-C3	G38-C5	G38-C8	G38-C7	G38-C19	
Long Descrip.	U-3 NOx S	U-3 SO2 S	U-3 CO St	U-3 CO Se	U-3 CO2 S	U-3 O2 St	U-3 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/06/2010 08:44	84.8	6	22	22	8.4	11.16	82.0	
08/06/2010 08:45	81.5	7	19	19	8.0	11.51	82.0	
08/06/2010 08:46	79.0	12	21	21	8.0	11.49	82.0	
08/06/2010 08:47	70.3	17	18	18	7.8	11.73	82.0	
08/06/2010 08:48	74.0	22	16	16	8.0	11.49	82.0	
08/06/2010 08:49	69.8	26	18	18	7.9	11.73	81.0	
08/06/2010 08:50	63.0	27	19	19	7.8	11.76	81.0	
08/06/2010 08:51	60.5	24	20	20	7.9	11.63	81.0	
08/06/2010 08:52	64.0	22	17	17	8.0	11.53	81.0	
08/06/2010 08:53	74.0	22	17	17	8.3	11.18	82.0	
08/06/2010 08:54	89.0	27	19	19	8.6	10.94	82.0	
08/06/2010 08:55	85.5	23	16	16	8.2	11.26	82.0	
08/06/2010 08:56	93.5	17	13	13	8.1	11.33	82.0	
08/06/2010 08:57	87.0	18	15	15	8.1	11.44	82.0	
08/06/2010 08:58	71.5	19	14	14	7.8	11.69	82.0	
08/06/2010 08:59	65.5	18	15	15	7.6	11.94	81.0	
08/06/2010 09:00	65.5	16	15	15	7.7	11.86	81.0	
08/06/2010 09:01	66.3	18	16	16	8.1	11.36	81.0	
08/06/2010 09:02	61.3	19	14	14	7.8	11.69	81.0	
08/06/2010 09:03	63.3	17	14	14	7.6	11.89	80.0	
08/06/2010 09:04	67.3	16	13	13	7.8	11.78	80.0	
08/06/2010 09:05	58.0	15	13	13	7.9	11.60	80.0	
08/06/2010 09:06	63.8	14	14	14	8.2	11.24	80.0	
08/06/2010 09:07	87.5	13	15	15	8.1	11.31	80.0	
Raw Average	=	72	18	16.3	16.3	7.9	11.5	81.2
O2 Corrected Avg.	=	107	26	24	24			
Lbs./Hour Avg.	=	27.31	9.46	3.74				
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Economizer Rata Report

R But

Company: Covanta Huntington, Inc.
Report Name: UNIT #3 ECON RATA

Start of Report: 08/06/2010 09:37
End of Report: 08/06/2010 10:00

Validation: Valid Data Only



	SO2e	CO2e	O2e
Group#-Channel#	G38-C6	G38-C2	G38-C1
Long Descrip.	U-3 SO2 E	U-3 CO2 E	U-3 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/06/2010 09:37	60	8.5	10.9
08/06/2010 09:38	59	8.7	10.7
08/06/2010 09:39	58	8.6	10.7
08/06/2010 09:40	56	8.6	10.8
08/06/2010 09:41	55	8.4	11.0
08/06/2010 09:42	60	9.2	10.2
08/06/2010 09:43	62	9.1	10.3
08/06/2010 09:44	59	9.0	10.4
08/06/2010 09:45	52	8.7	10.8
08/06/2010 09:46	55	8.4	11.0
08/06/2010 09:47	54	8.7	10.8
08/06/2010 09:48	60	8.9	10.5
08/06/2010 09:49	61	8.7	10.7
08/06/2010 09:50	65	9.4	9.9
08/06/2010 09:51	61	8.5	10.9
08/06/2010 09:52	55	8.2	11.3
08/06/2010 09:53	60	9.1	10.4
08/06/2010 09:54	66	9.5	10.0
08/06/2010 09:55	68	9.3	10.1
08/06/2010 09:56	63	8.8	10.7
08/06/2010 09:57	65	9.0	10.6
08/06/2010 09:58	71	9.3	10.2
08/06/2010 09:59	73	9.3	10.2
08/06/2010 10:00	72	9.4	10.1
Raw Average	=	61	8.8
O2 Corrected Avg.	=	82	
Period % Recovery	=	100.0	100.0

Stack Rata Report

R44

Company: Covanta Huntington, Inc.
Report Name: UNIT #3 STACK RATA



Start of Report: 08/06/2010 09:37
End of Report: 08/06/2010 10:00

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G38-C10	G38-C9	G38-C3	G38-C5	G38-C8	G38-C7	G38-C19	
Long Descrip.	U-3 NOx S	U-3 SO2 S	U-3 CO St	U-3 CO Se	U-3 CO2 S	U-3 O2 St	U-3 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/06/2010 09:37	69.8	0	15	15	7.5	11.90	80.0	
08/06/2010 09:38	63.5	0	17	17	7.6	11.79	80.0	
08/06/2010 09:39	72.5	0	19	19	7.7	11.73	80.0	
08/06/2010 09:40	80.5	0	18	18	7.6	11.81	80.0	
08/06/2010 09:41	75.8	0	17	17	7.5	12.03	80.0	
08/06/2010 09:42	81.3	0	18	18	8.0	11.35	81.0	
08/06/2010 09:43	83.5	0	18	18	8.2	11.24	81.0	
08/06/2010 09:44	95.0	0	15	15	8.0	11.49	82.0	
08/06/2010 09:45	98.3	0	16	16	7.8	11.69	81.0	
08/06/2010 09:46	82.8	0	14	14	7.5	11.94	81.0	
08/06/2010 09:47	79.5	0	14	14	7.7	11.79	81.0	
08/06/2010 09:48	63.5	0	15	15	7.9	11.53	81.0	
08/06/2010 09:49	73.8	0	13	13	7.8	11.64	82.0	
08/06/2010 09:50	78.5	0	14	14	8.2	11.06	82.0	
08/06/2010 09:51	89.0	0	13	13	7.8	11.71	81.0	
08/06/2010 09:52	94.3	0	14	14	7.3	12.21	81.0	
08/06/2010 09:53	73.0	0	17	17	7.9	11.56	81.0	
08/06/2010 09:54	60.3	0	19	19	8.3	11.14	81.0	
08/06/2010 09:55	82.8	0	18	18	8.4	11.11	81.0	
08/06/2010 09:56	98.5	0	15	15	7.9	11.64	80.0	
08/06/2010 09:57	86.8	0	15	15	8.0	11.60	80.0	
08/06/2010 09:58	66.8	0	17	17	8.2	11.34	81.0	
08/06/2010 09:59	66.5	0	17	17	8.3	11.24	81.0	
08/06/2010 10:00	77.3	0	17	17	8.4	11.19	81.0	
Raw Average	=	78	0	16.0	16.0	7.9	11.5	80.8
O2 Corrected Avg.	=	117	0	23	23			
Lbs./Hour Avg.	=	29.81	0.00	3.68				
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Economizer Rata Report

R#5

Company: Covanta Huntington, Inc.
Report Name: UNIT #3 ECON RATA



Start of Report: 08/06/2010 10:13
End of Report: 08/06/2010 10:36 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G38-C6	G38-C2	G38-C1
Long Descrip.	U-3 SO2 E	U-3 CO2 E	U-3 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/06/2010 10:13	93	8.7	10.9
08/06/2010 10:14	93	9.0	10.6
08/06/2010 10:15	93	9.0	10.6
08/06/2010 10:16	94	9.1	10.4
08/06/2010 10:17	101	9.3	10.2
08/06/2010 10:18	93	8.5	11.1
08/06/2010 10:19	96	9.1	10.4
08/06/2010 10:20	100	9.4	10.1
08/06/2010 10:21	106	9.4	10.1
08/06/2010 10:22	105	9.2	10.3
08/06/2010 10:23	102	9.2	10.3
08/06/2010 10:24	100	9.4	10.1
08/06/2010 10:25	99	9.2	10.3
08/06/2010 10:26	97	9.2	10.3
08/06/2010 10:27	97	9.4	10.2
08/06/2010 10:28	98	9.5	10.0
08/06/2010 10:29	101	9.8	9.7
08/06/2010 10:31		8.6	
08/06/2010 10:32	86	<	10.5 <
08/06/2010 10:33	80	8.5	11.1
08/06/2010 10:34	79	8.3	11.3
08/06/2010 10:35	89	8.9	10.7
08/06/2010 10:36	92	8.8	10.8
Raw Average	=	95	9.0 10.4
O2 Corrected Avg.	=	126	
Period % Recovery	=	95.7	100.0 95.7

Stack Rata Report

R#5

Company: Covanta Huntington, Inc.
Report Name: UNIT #3 STACK RATA



Start of Report: 08/06/2010 10:13
End of Report: 08/06/2010 10:36

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G38-C10	G38-C9	G38-C3	G38-C5	G38-C8	G38-C7	G38-C19	
Long Descrip.	U-3 NOx S	U-3 SO2 S	U-3 CO St	U-3 CO Se	U-3 CO2 S	U-3 O2 St	U-3 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/06/2010 10:13	54.3	0	15	15	7.7	11.90	81.0	
08/06/2010 10:14	59.0	0	17	17	7.9	11.66	81.0	
08/06/2010 10:15	69.0	0	17	17	8.0	11.56	81.0	
08/06/2010 10:16	76.8	0	15	15	8.0	11.56	81.0	
08/06/2010 10:17	81.0	0	18	18	8.3	11.25	80.0	
08/06/2010 10:18	71.3	0	16	16	7.7	11.98	80.0	
08/06/2010 10:19	71.3	0	17	17	8.0	11.55	80.0	
08/06/2010 10:20	72.0	0	21	21	8.3	11.21	81.0	
08/06/2010 10:21	82.5	0	17	17	8.4	11.16	81.0	
08/06/2010 10:22	85.0	0	16	16	8.2	11.30	81.0	
08/06/2010 10:23	79.3	0	20	20	8.2	11.35	81.0	
08/06/2010 10:24	77.5	0	20	20	8.4	11.15	81.0	
08/06/2010 10:25	77.0	0	16	16	8.2	11.31	81.0	
08/06/2010 10:26	73.8	0	15	15	8.2	11.38	81.0	
08/06/2010 10:27	75.3	0	16	16	8.3	11.29	82.0	
08/06/2010 10:28	86.8	0	13	13	8.4	11.08	82.0	
08/06/2010 10:29	108.8	0	11	11	8.8	10.85	83.0	
08/06/2010 10:30								
08/06/2010 10:31								
08/06/2010 10:32	128.0	<	0	<	10	<	8.3	11.43 < 84.0
08/06/2010 10:33	98.0	0	8	8	7.6	11.99	83.0	
08/06/2010 10:34	60.8	0	10	10	7.4	12.23	82.0	
08/06/2010 10:35	59.0	0	13	13	7.8	11.76	83.0	
08/06/2010 10:36	60.5	0	12	12	7.8	11.74	83.0	
Raw Average	=	77	0	15.1	15.1	8.0	11.4	81.6
O2 Corrected Avg.	=	114	0	22	22			
Lbs./Hour Avg.	=	29.03	0.00	3.44				
Period % Recovery	=	95.7	95.7	95.7	95.7	100.0	95.7	100.0

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Economizer Rata Report

Company: Covanta Huntington, Inc.
 Report Name: UNIT #3 ECON RATA



Start of Report: 08/06/2010 10:50
 End of Report: 08/06/2010 11:13 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G38-C6	G38-C2	G38-C1
Long Descrip.	U-3 SO2 E	U-3 CO2 E	U-3 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/06/2010 10:50	85	8.5	11.1
08/06/2010 10:51	87	8.5	11.1
08/06/2010 10:52	90	8.4	11.3
08/06/2010 10:53	99	9.1	10.5
08/06/2010 10:54	101	9.0	10.6
08/06/2010 10:55	110	9.1	10.5
08/06/2010 10:56	115	9.6	9.9
08/06/2010 10:57	110	9.6	10.0
08/06/2010 10:58	95	9.0	10.6
08/06/2010 10:59	89	8.4	11.1
08/06/2010 11:00	89	8.5	11.2
08/06/2010 11:01	91	9.2	10.5
08/06/2010 11:02	105	10.3	9.3
08/06/2010 11:03	95	9.4	10.1
08/06/2010 11:04	81	9.2	10.4
08/06/2010 11:05	77	9.1	10.4
08/06/2010 11:06	74	8.6	11.0
08/06/2010 11:07	76	9.0	10.6
08/06/2010 11:08	76	8.9	10.6
08/06/2010 11:09	72	9.1	10.4
08/06/2010 11:10	74	9.5	10.0
08/06/2010 11:11	68	9.5	10.0
08/06/2010 11:12	66	9.3	10.1
08/06/2010 11:13	66	9.3	10.1
Raw Average	= 87	9.0	10.4
O2 Corrected Avg.	= 116		
Period % Recovery	= 100.0	100.0	100.0

Stack Rata Report

R #6

Company: Covanta Huntington, Inc.
 Report Name: UNIT #3 STACK RATA



Start of Report: 08/06/2010 10:50
 End of Report: 08/06/2010 11:13

Validation: Valid Data Only

	NOxs	SO2s	COlow	COhigh	CO2	O2	Steam Flow
Group#-Channel#	G38-C10	G38-C9	G38-C3	G38-C5	G38-C8	G38-C7	G38-C19
Long Descrip.	U-3 NOx S	U-3 SO2 S	U-3 CO St	U-3 CO Se	U-3 CO2 S	U-3 O2 St	U-3 Steam
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100
08/06/2010 10:50	60.0	0	13	13	7.6	11.96	83.0
08/06/2010 10:51	57.3	0	14	14	7.7	12.00	81.0
08/06/2010 10:52	53.8	0	17	17	7.5	12.18	80.0
08/06/2010 10:53	53.5	0	19	19	8.0	11.58	81.0
08/06/2010 10:54	56.0	0	15	15	8.0	11.60	81.0
08/06/2010 10:55	58.3	0	14	14	8.0	11.54	81.0
08/06/2010 10:56	72.8	0	18	18	8.6	11.04	81.0
08/06/2010 10:57	87.5	0	14	14	8.4	11.05	82.0
08/06/2010 10:58	92.8	0	10	10	8.2	11.46	81.0
08/06/2010 10:59	75.0	0	10	10	7.7	12.01	80.0
08/06/2010 11:00	51.5	0	12	12	7.6	12.08	79.0
08/06/2010 11:01	54.3	0	15	15	8.0	11.59	80.0
08/06/2010 11:02	74.8	0	21	21	9.2	10.50	82.0
08/06/2010 11:03	108.8	0	13	13	8.7	11.04	82.0
08/06/2010 11:04	138.8	0	12	12	8.2	11.43	82.0
08/06/2010 11:05	110.5	0	12	12	8.2	11.40	81.0
08/06/2010 11:06	58.0	0	13	13	7.7	11.90	81.0
08/06/2010 11:07	46.3	0	16	16	8.0	11.61	81.0
08/06/2010 11:08	50.0	0	16	16	8.0	11.56	80.0
08/06/2010 11:09	59.8	0	16	16	8.0	11.51	81.0
08/06/2010 11:10	76.8	0	20	20	8.4	11.05	81.0
08/06/2010 11:11	117.3	0	16	16	8.4	11.06	81.0
08/06/2010 11:12	127.3	0	13	13	8.3	11.16	82.0
08/06/2010 11:13	92.0	0	15	15	8.3	11.16	82.0
Raw Average	=	76	0	14.7	14.7	8.1	11.4
O2 Corrected Avg.	=	112	0	21	21		
Lbs./Hour Avg.	=	28.18	0.00	3.31			
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0

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Economizer Rata Report

R#7

Company: Covanta Huntington, Inc.
 Report Name: UNIT #3 ECON RATA



Start of Report: 08/06/2010 11:25
 End of Report: 08/06/2010 11:48 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G38-C6	G38-C2	G38-C1
Long Descrip.	U-3 SO2 E	U-3 CO2 E	U-3 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/06/2010 11:25	80	9.3	10.1
08/06/2010 11:26	76	9.1	10.3
08/06/2010 11:27	75	8.7	10.8
08/06/2010 11:28	77	8.8	10.6
08/06/2010 11:29	83	9.1	10.3
08/06/2010 11:31		8.4	
08/06/2010 11:32	74 <	8.8	10.6 <
08/06/2010 11:33	70	8.7	10.7
08/06/2010 11:34	70	8.7	10.7
08/06/2010 11:35	74	8.8	10.5
08/06/2010 11:36	74	9.0	10.4
08/06/2010 11:37	70	8.5	10.9
08/06/2010 11:38	75	8.9	10.5
08/06/2010 11:39	79	8.8	10.5
08/06/2010 11:40	86	9.0	10.4
08/06/2010 11:41	92	8.9	10.4
08/06/2010 11:42	84	8.7	10.6
08/06/2010 11:43	83	8.6	10.8
08/06/2010 11:44	95	8.8	10.5
08/06/2010 11:45	101	8.6	10.7
08/06/2010 11:46	109	9.0	10.4
08/06/2010 11:47	99	9.4	10.0
08/06/2010 11:48	83	8.7	10.7
Raw Average =	82	8.8	10.5
O2 Corrected Avg. =	110		
Period % Recovery =	95.7	100.0	95.7

Stack Rata Report

R#7

Company: Covanta Huntington, Inc.
 Report Name: UNIT #3 STACK RATA



Start of Report: 08/06/2010 11:25
 End of Report: 08/06/2010 11:48

Validation: Valid Data Only

	NOxs	SO2S	COlow	C0high	CO2	O2	Steam	Flow
Group#-Channel#	G38-C10	G38-C9	G38-C3	G38-C5	G38-C8	G38-C7	G38-C19	
Long Descrip.	U-3 NOx S	U-3 SO2 S	U-3 CO St	U-3 CO Se	U-3 CO2 S	U-3 O2 St	U-3 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/06/2010 11:25	76.0	0	10	10	8.3	11.10	81.0	
08/06/2010 11:26	106.3	0	9	9	8.1	11.31	81.0	
08/06/2010 11:27	104.3	0	7	7	7.8	11.71	80.0	
08/06/2010 11:28	76.3	0	9	9	7.8	11.61	80.0	
08/06/2010 11:29	54.0	0	9	9	8.1	11.33	80.0	
08/06/2010 11:30								
08/06/2010 11:31								
08/06/2010 11:32	75.5	<	0	<	7	<	7.9	11.58 < 81.0
08/06/2010 11:33	73.5	0	7	7	7.7	11.73	81.0	
08/06/2010 11:34	69.8	0	7	7	7.7	11.66	81.0	
08/06/2010 11:35	74.0	0	6	6	7.8	11.56	81.0	
08/06/2010 11:36	80.0	0	7	7	8.0	11.43	81.0	
08/06/2010 11:37	85.3	0	8	8	7.7	11.79	80.0	
08/06/2010 11:38	80.8	0	8	8	7.9	11.54	80.0	
08/06/2010 11:39	72.5	0	8	8	7.9	11.49	80.0	
08/06/2010 11:40	65.8	0	7	7	7.9	11.46	80.0	
08/06/2010 11:41	70.5	0	8	8	8.1	11.30	80.0	
08/06/2010 11:42	66.8	0	9	9	7.8	11.60	80.0	
08/06/2010 11:43	72.3	0	7	7	7.7	11.74	80.0	
08/06/2010 11:44	71.3	0	8	8	7.9	11.49	80.0	
08/06/2010 11:45	78.8	1	9	9	7.8	11.61	80.0	
08/06/2010 11:46	77.3	3	11	11	7.9	11.50	80.0	
08/06/2010 11:47	111.5	3	14	14	8.4	10.98	81.0	
08/06/2010 11:48	131.0	2	8	8	7.9	11.55	81.0	
Raw Average	=	80	0	8.3	8.3	7.8	11.5	80.4
O2 Corrected Avg.	=	119	0	12	12			
Lbs./Hour Avg.	=	30.36	0.21	1.90				
Period % Recovery	=	95.7	95.7	95.7	100.0	95.7	100.0	

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Economizer Rata Report

R#Q

Company: Covanta Huntington, Inc.
Report Name: UNIT #3 ECON RATA



Start of Report: 08/06/2010 12:04
End of Report: 08/06/2010 12:27 **Validation:** Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G38-C6	G38-C2	G38-C1
Long Descrip.	U-3 SO2 E	U-3 CO2 E	U-3 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/06/2010 12:04	80	9.7	9.7
08/06/2010 12:05	72	9.0	10.5
08/06/2010 12:06	71	9.0	10.4
08/06/2010 12:07	73	8.9	10.6
08/06/2010 12:08	73	8.9	10.6
08/06/2010 12:09	80	9.5	10.0
08/06/2010 12:10	90	9.6	9.8
08/06/2010 12:11	88	9.3	10.2
08/06/2010 12:12	89	9.0	10.5
08/06/2010 12:13	94	8.8	10.8
08/06/2010 12:14	94	9.2	10.3
08/06/2010 12:15	96	9.6	9.9
08/06/2010 12:16	99	9.5	9.9
08/06/2010 12:17	94	9.3	10.1
08/06/2010 12:18	95	9.4	10.1
08/06/2010 12:19	96	9.3	10.1
08/06/2010 12:20	102	9.6	9.8
08/06/2010 12:21	100	9.3	10.2
08/06/2010 12:22	93	8.9	10.6
08/06/2010 12:23	101	8.9	10.7
08/06/2010 12:24	103	8.7	10.8
08/06/2010 12:25	105	9.5	10.0
08/06/2010 12:26	126	10.2	9.2
08/06/2010 12:27	103	9.2	10.2
Raw Average	= 92	9.2	10.2
O2 Corrected Avg.	= 120		
Period % Recovery	= 100.0	100.0	100.0

Stack Rata Report

R#0

Company: Covanta Huntington, Inc.
 Report Name: UNIT #3 STACK RATA



Start of Report: 08/06/2010 12:04
 End of Report: 08/06/2010 12:27

Validation: Valid Data Only

	NOxs	SO2s	COlow	COhigh	CO2	O2	Steam Flow
Group#-Channel#	G38-C10	G38-C9	G38-C3	G38-C5	G38-C8	G38-C7	G38-C19
Long Descrip.	U-3 NOx S	U-3 SO2 S	U-3 CO St	U-3 CO Se	U-3 CO2 S	U-3 O2 St	U-3 Steam
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100
08/06/2010 12:04	76.8	1	12	12	8.6	10.91	81.0
08/06/2010 12:05	106.0	1	13	13	8.2	11.34	81.0
08/06/2010 12:06	107.8	0	9	9	8.0	11.44	81.0
08/06/2010 12:07	76.3	0	10	10	8.0	11.53	81.0
08/06/2010 12:08	54.8	0	12	12	7.9	11.63	80.0
08/06/2010 12:09	59.0	0	13	13	8.3	11.09	81.0
08/06/2010 12:10	72.0	0	11	11	8.7	10.83	82.0
08/06/2010 12:11	87.5	0	8	8	8.3	11.16	82.0
08/06/2010 12:12	79.5	0	8	8	8.1	11.45	81.0
08/06/2010 12:13	60.8	0	9	9	7.9	11.68	81.0
08/06/2010 12:14	62.0	0	11	11	8.2	11.34	81.0
08/06/2010 12:15	82.3	0	11	11	8.4	11.00	81.0
08/06/2010 12:16	109.5	0	12	12	8.7	10.88	82.0
08/06/2010 12:17	114.0	0	11	11	8.3	11.09	82.0
08/06/2010 12:18	99.8	0	10	10	8.3	11.11	82.0
08/06/2010 12:19	84.5	0	11	11	8.3	11.13	82.0
08/06/2010 12:20	83.8	0	10	10	8.6	10.88	83.0
08/06/2010 12:21	77.8	0	13	13	8.4	11.14	82.0
08/06/2010 12:22	76.5	0	12	12	7.9	11.56	82.0
08/06/2010 12:23	62.0	0	17	17	7.9	11.65	81.0
08/06/2010 12:24	56.5	0	19	19	7.8	11.76	81.0
08/06/2010 12:25	68.0	0	17	17	8.1	11.31	81.0
08/06/2010 12:26	83.3	0	21	21	9.1	10.36	82.0
08/06/2010 12:27	95.3	0	14	14	8.3	11.15	82.0
Raw Average	=	80	0	12.2	12.2	8.2	81.4
O2 Corrected Avg.	=	115	0	17	17		
Lbs./Hour Avg.	=	29.35	0.04	2.71			
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0

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Economizer Rata Report

R#9

Company: Covanta Huntington, Inc.
Report Name: UNIT #3 ECON RATA



Start of Report: 08/06/2010 12:41
End of Report: 08/06/2010 13:04 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G38-C6	G38-C2	G38-C1
Long Descrip.	U-3 SO2 E	U-3 CO2 E	U-3 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/06/2010 12:41	88	9.4	10.0
08/06/2010 12:42	88	9.2	10.3
08/06/2010 12:43	83	8.9	10.5
08/06/2010 12:44	80	9.0	10.5
08/06/2010 12:45	84	9.2	10.3
08/06/2010 12:46	87	9.2	10.2
08/06/2010 12:47	99	9.4	10.0
08/06/2010 12:48	83	9.4	10.0
08/06/2010 12:49	74	9.1	10.4
08/06/2010 12:50	77	9.3	10.1
08/06/2010 12:51	74	9.2	10.3
08/06/2010 12:52	73	9.1	10.3
08/06/2010 12:53	74	9.0	10.4
08/06/2010 12:54	72	8.8	10.8
08/06/2010 12:55	75	9.2	10.2
08/06/2010 12:56	79	9.1	10.3
08/06/2010 12:57	70	9.1	10.4
08/06/2010 12:58	64	9.2	10.3
08/06/2010 12:59	67	9.1	10.3
08/06/2010 13:00	68	9.4	10.1
08/06/2010 13:01	66	9.7	9.7
08/06/2010 13:02	69	9.7	9.6
08/06/2010 13:03	63	9.3	10.2
08/06/2010 13:04	62	9.2	10.3
Raw Average	= 75	9.2	10.2
O2 Corrected Avg.	= 98		
Period % Recovery	= 100.0	100.0	100.0

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Stack Rata Report

R#9

Company: Covanta Huntington, Inc.
 Report Name: UNIT #3 STACK RATA



Start of Report: 08/06/2010 12:41
 End of Report: 08/06/2010 13:04

Validation: Valid Data Only

	NOxs	SO2S	COlow	COhigh	CO2	O2	Steam	Flow
Group#-Channel#	G38-C10	G38-C9	G38-C3	G38-C5	G38-C8	G38-C7	G38-C19	
Long Descrip.	U-3 NOx S	U-3 SO2 S	U-3 CO St	U-3 CO Se	U-3 CO2 S	U-3 O2 St	U-3 Steam	
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam	
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr	
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100	
08/06/2010 12:41	83.0	0	12	12	8.3	11.13	83.0	
08/06/2010 12:42	68.8	0	13	13	8.1	11.35	82.0	
08/06/2010 12:43	64.5	0	15	15	8.0	11.53	82.0	
08/06/2010 12:44	54.8	0	17	17	7.9	11.59	82.0	
08/06/2010 12:45	61.5	0	15	15	8.1	11.39	82.0	
08/06/2010 12:46	85.3	0	13	13	8.2	11.30	82.0	
08/06/2010 12:47	98.5	0	13	13	8.3	11.15	82.0	
08/06/2010 12:48	91.5	0	12	12	8.3	11.13	82.0	
08/06/2010 12:49	77.5	0	15	15	8.1	11.39	82.0	
08/06/2010 12:50	73.8	0	15	15	8.2	11.28	82.0	
08/06/2010 12:51	75.5	0	14	14	8.1	11.35	82.0	
08/06/2010 12:52	82.5	0	12	12	8.1	11.39	82.0	
08/06/2010 12:53	86.5	0	11	11	8.0	11.46	82.0	
08/06/2010 12:54	66.8	0	13	13	7.8	11.83	82.0	
08/06/2010 12:55	62.3	0	13	13	8.0	11.39	82.0	
08/06/2010 12:56	67.0	0	14	14	8.1	11.40	82.0	
08/06/2010 12:57	74.5	0	14	14	8.0	11.51	82.0	
08/06/2010 12:58	75.5	0	15	15	8.1	11.41	82.0	
08/06/2010 12:59	63.8	0	14	14	8.1	11.38	82.0	
08/06/2010 13:00	69.5	0	14	14	8.2	11.24	82.0	
08/06/2010 13:01	86.5	0	15	15	8.4	10.95	82.0	
08/06/2010 13:02	107.8	0	12	12	8.8	10.75	83.0	
08/06/2010 13:03	114.0	0	9	9	8.3	11.24	82.0	
08/06/2010 13:04	90.0	0	10	10	8.1	11.39	82.0	
Raw Average	=	78	0	13.3	13.3	8.1	11.3	82.0
O2 Corrected Avg.	=	113	0	19	19			
Lbs./Hour Avg.	=	29.14	0.00	3.01				
Period % Recovery	=	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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Economizer Rata Report

Company: Covanta Huntington, Inc.
 Report Name: UNIT #3 ECON RATA



Start of Report: 08/06/2010 13:20
 End of Report: 08/06/2010 13:43 Validation: Valid Data Only

	SO2e	CO2e	O2e
Group#-Channel#	G38-C6	G38-C2	G38-C1
Long Descrip.	U-3 SO2 E	U-3 CO2 E	U-3 O2 Ec
Short Descrip.	SO2e	CO2e	O2e
Units	ppm	%	%
Range	0-500	0-20	0-25
08/06/2010 13:20	75	9.0	10.5
08/06/2010 13:21	76	8.8	10.7
08/06/2010 13:22	81	9.0	10.6
08/06/2010 13:23	92	9.2	10.3
08/06/2010 13:24	92	9.1	10.5
08/06/2010 13:25	97	9.1	10.4
08/06/2010 13:26	91	9.1	10.5
08/06/2010 13:27	98	9.8	9.6
08/06/2010 13:28	96	9.7	9.7
08/06/2010 13:29	84	9.1	10.4
08/06/2010 13:31		8.2	
08/06/2010 13:32	88	<	10.8 <
08/06/2010 13:33	93	9.0	10.5
08/06/2010 13:34	99	9.2	10.3
08/06/2010 13:35	99	9.0	10.5
08/06/2010 13:36	106	9.0	10.4
08/06/2010 13:37	100	8.9	10.6
08/06/2010 13:38	96	8.9	10.6
08/06/2010 13:39	99	9.2	10.3
08/06/2010 13:40	95	9.2	10.2
08/06/2010 13:41	86	9.0	10.5
08/06/2010 13:42	90	9.1	10.4
08/06/2010 13:43	88	8.8	10.7
Raw Average =	91	9.0	10.4
O2 Corrected Avg. =	121		
Period % Recovery =	95.7	100.0	95.7

Stack Rata Report

Company: Covanta Huntington, Inc.
 Report Name: UNIT #3 STACK RATA



Start of Report: 08/06/2010 13:20
 End of Report: 08/06/2010 13:43

Validation: Valid Data Only

	NOxs	SO2s	COlow	COhigh	CO2	O2	Steam Flow
Group#-Channel#	G38-C10	G38-C9	G38-C3	G38-C5	G38-C8	G38-C7	G38-C19
Long Descrip.	U-3 NOx S	U-3 SO2 S	U-3 CO St	U-3 CO Se	U-3 CO2 S	U-3 O2 St	U-3 Steam
Short Descrip.	NOxs	SO2s	COs LoRng	COs	CO2s	O2s	Steam
Units	ppm	ppm	ppm	ppm	%	%	K#/Hr
Range	0-500	0-200	0-200	0-2000	0-20	0-25	0-100
08/06/2010 13:20	91.5	0	11	11	8.0	11.50	80.0
08/06/2010 13:21	80.8	0	11	11	7.9	11.68	80.0
08/06/2010 13:22	61.0	0	13	13	7.9	11.64	80.0
08/06/2010 13:23	60.0	0	16	16	8.1	11.36	79.0
08/06/2010 13:24	57.8	0	14	14	8.0	11.54	79.0
08/06/2010 13:25	70.3	0	18	18	8.1	11.43	79.0
08/06/2010 13:26	62.8	0	16	16	8.0	11.54	79.0
08/06/2010 13:27	90.3	0	16	16	8.7	10.84	80.0
08/06/2010 13:28	100.3	0	15	15	8.8	10.74	81.0
08/06/2010 13:29	103.5	0	10	10	8.1	11.41	80.0
08/06/2010 13:30							
08/06/2010 13:31							
08/06/2010 13:32	87.5	<	0	<	9	<	7.9
08/06/2010 13:33	77.0	0	8	8	7.9	11.55	80.0
08/06/2010 13:34	72.5	0	11	11	8.1	11.33	80.0
08/06/2010 13:35	65.5	0	10	10	8.0	11.43	80.0
08/06/2010 13:36	63.8	0	9	9	8.1	11.38	79.0
08/06/2010 13:37	65.5	0	10	10	7.9	11.56	79.0
08/06/2010 13:38	61.3	0	12	12	8.0	11.53	79.0
08/06/2010 13:39	75.8	0	14	14	8.1	11.36	79.0
08/06/2010 13:40	98.5	0	16	16	8.3	11.21	79.0
08/06/2010 13:41	96.3	0	11	11	8.1	11.46	79.0
08/06/2010 13:42	82.5	0	9	9	8.1	11.39	79.0
08/06/2010 13:43	73.5	0	9	9	8.0	11.58	78.0
Raw Average	=	77	0	12.1	12.1	8.0	11.4
O2 Corrected Avg.	=	113	0	17	17		
Lbs./Hour Avg.	=	28.11	0.00	2.70			
Period % Recovery	=	95.7	95.7	95.7	100.0	95.7	100.0

APPENDIX D

Reference Method Field Data (Moisture, Flow Rate)

ISOKINETIC SAMPLING TRAIN RESULTS - METHOD

M4

Client Name	Covanta Projects, Inc.	Operator	RBP
Plant Name	Huntington Resource Recovery Facility	Project #	10731
Sampling Location	Unit 1 FF Outlet	Standard Temperature, °F	68

USE IN AVERAGE OF RUN SET? 1 or 0 =>	1	1		SET AVERAGE
Run Number		1-O-M4-1	1-O-M4-2	
Run Date		08/03/10	08/03/10	
Run Start Time	hh:mm	848	1316	
Run Stop Time	hh:mm	1254	1456	

Sampling Parameters

Meter Calibration Factor	Y	1.0028	1.0028	
Y _{QA} Calculated by Test Run	Y _{QA}	0.9456	0.9526	
Y _{QA} PASS/FAIL by Test Run	Check	FAIL	FAIL	FAIL
Pitot Tube Coefficient	C _p	0.84	0.84	
Stack/Duct Static Pressure	in H ₂ O	-14.00	-13.70	-13.85
Stack Cross-Sectional Area	ft ²	21.65	21.65	21.65
Barometric Pressure	in Hg	29.9	29.9	29.9
Carbon Dioxide Percentage	% CO ₂	8.4	8.6	8.5
Oxygen Percentage	% O ₂	11.0	10.8	10.9
Carbon Monoxide Percentage	% CO	0.0	0.0	0.0
Nitrogen Percentage	% N ₂	80.6	80.6	80.6
Total Water Volume Collected	mL	382.1	182.5	282.3
Sample Volume	ft ³	102.158	42.334	72.246
Average Meter Temperature	°F	83	86	84
Average Stack Temperature	°F	276	275	276
Average Delta H	in H ₂ O	0.50	0.50	0.50
Total Sampling Time	min	240	100	170

Air Flow Parameters

Volume of Water vapor @ STP	SCF	17.985	8.590		13.288
Volume Metered @ STP	DSCF	99.619	41.086		70.352
Absolute Stack/Duct Pressure	in Hg	28.9	28.9		28.9
Absolute Meter Pressure	in Hg	29.9	29.9		29.9
Calculated Stack Moisture	% H ₂ O	15.3	17.3		16.3
Dry Mole Fraction	decimal	0.847	0.827		0.837
Avg Differential Pressure (Delta P)	in H ₂ O	0.883	0.880		0.882
Dry Gas Molecular Weight	lb/lb-mole	29.78	29.81		29.80
Wet Stack Gas Molecular Weight	lb/lb-mole	27.98	27.77		27.87
Average Stack Gas Velocity	ft/sec	64.43	64.49		64.46

Air Flow Rate Results

Actual Stack Flow/Minute	ACFM	83,688	83,767		83,727
Dry Standard Stack Flow/Minute	DSCFM	49,049	48,036		48,543

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Carbon Dioxide

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 1 FF Outlet		
Analyzer:	Siemens Ultramat 21P		
Serial Number:	A08-361		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Date	Test Start Time	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/3/10	845	809	8128	8.0	8.4	valid	0.128	0.016
2	8/3/10	924	948	8.603	8.4	8.4	valid	0.203	0.041
3	8/3/10	1010	1034	8.761	8.6	8.4	valid	0.161	0.026
4	8/3/10	1047	1111	8.407	8.2	8.4	valid	0.207	0.043
5	8/3/10	1123	1147	8.606	8.4	8.4	valid	0.206	0.042
6	8/3/10	1202	1226	8.672	8.5	8.5	valid	0.172	0.030
7	8/3/10	1238	1302	8.660	8.5	8.5	valid	0.160	0.026
8	8/3/10	1316	1340	8.758	8.6	8.6	valid	0.158	0.025
9	8/3/10	1351	1415	8.690	8.5	8.6	valid	0.190	0.036
10	8/3/10	1428	1452	8.790	8.6	8.6	valid	0.190	0.036
11	0	0	0				valid	#VALUE!	#VALUE!

Averages: 8.608 8.430 #VALUE!

Standard Deviation	#VALUE!
Number of Tests	11
t-value	2.228
Confidence Coefficient	#VALUE!

Absolute Difference = #VALUE!

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Oxygen

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 1 FF Outlet		
Analyzer:	Servomex 1440		
Serial Number:	01440DIV02/3335		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Date	Test Start Time	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/3/10	845	909	11.495	11.4	11.4	valid	0.095	0.009
2	8/3/10	924	948	10.950	11.0	11.0	valid	-0.050	0.003
3	8/3/10	1010	1034	10.821	10.8	10.8	valid	0.021	0.000
4	8/3/10	1047	1111	11.211	11.3	11.3	valid	-0.089	0.008
5	8/3/10	1123	1147	11.006	11.0	11.0	valid	0.006	0.000
6	8/3/10	1202	1226	10.906	10.8	10.8	valid	0.106	0.011
7	8/3/10	1238	1302	10.902	10.8	10.8	valid	0.102	0.010
8	8/3/10	1316	1340	10.893	10.8	10.8	valid	0.093	0.009
9	8/3/10	1351	1415	10.924	10.9	10.9	valid	0.024	0.001
10	8/3/10	1428	1452	10.742	10.7	10.7	valid	0.042	0.002
11	0	0	0				valid	#VALUE!	#VALUE!
Averages:						10.985	10.950	#VALUE!	

Standard Deviation #VALUE!
 Number of Tests 11
 t-value 2.228
 Confidence Coefficient #VALUE!

Absolute Difference = #VALUE!

EPA Method 4 for Percent Moisture Determination

Client Name	Covanta Projects, Inc.	Project #	10731
Plant Name	Huntington Resource Rec. Fac.	Balance Type	Electronic
Plant City, State	East Northport, NY	Balance ID	EB1
Sampling Location	Unit 1 FF. Outlet	Operator Name	Blake Cone

Run Number	1-O-M4-1	1-O-M4-2		
Test Date	08/03/10	08/03/10		
Reagent Box ID				

Impinger Reagent	DI	mL	mL	mL	mL
Final Catch Weight	grams	561.2	374.4		
Initial Tare Weight	grams	200.0	200.0		
Net Moisture Caught	grams	361.2	174.4	0.0	0.0

Impinger Reagent		mL	mL	mL	mL
Final Catch Weight	grams				
Initial Tare Weight	grams				
Net Moisture Caught	grams	0.0	0.0	0.0	0.0

Impinger Reagent		mL	mL	mL	mL
Final Catch Weight	grams				
KMnO4 Weight	grams				
KMnO4 g/mL	1.1				
Initial Jar Tare Weight	grams				
Net Moisture Caught	grams	0.0	0.0	0.0	0.0

Silica Gel	SG	grams	grams	grams	grams
Final Catch Weight	grams	270.2	263.9		
Initial Tare Weight	grams	249.3	255.8		
Net Moisture Caught	grams	20.9	8.1	0.0	0.0

Total Catch	grams	382.1	182.5	0.0	0.0
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Signature:	<i>Bill Harris</i>	Checked By:	<i>[Signature]</i>
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ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD

M4

Client Name	Covanta Projects, Inc.			Run #	1-O-M4-1								
Plant Name	Huntington Resource Recovery Facility		Project #	10731		Run Start	848						
Plant City, State	East Northport, NY		Personnel	RBP		Run End	1254						
Test Location	Unit 1 FF Outlet		Tester Signature	<i>ON FILE</i>									
Date of Test	08/03/10		Checked By	<i>[Signature]</i>									
Isokinetic Factor Setup		Pressures		Sampling Equipment			Filter ID & Tares	Actuals					
ΔH @ 0.75 SCFM	/	1.739	Pbar	29.9	Meter Console #	T5		CO ₂					
Meter Calibration Factor	1.0028	Pstatic	-14.00	Ideal Nozzle Diameter	0.234			8.4					
Pitot Tube Coefficient	0.84	Tstd, °F	68	Nozzle #	NA			O ₂					
Estimated DGM Temp	85	Pstd	29.92	Actual Nozzle Diameter	NA	XAD ID & Tares		11.0					
Estimated Stack Temp or M2 Avg.	280	Diluent		Probe Lgth/ID #	6'	161		CO					
Estimated Delta P or M2 Avg.	1.10	Estimates		Liner Material	BG	Y _{qa}		0.0					
Estimated Moisture Content	16.0	CO ₂	7.5	Filter Box #	HB4	0.9456		N ₂					
Estimated Dry Molecular Weight	29.70	O ₂	12.5	Cold Box ID #	CB20	5.71%		80.6					
Estimated Velocity, ft/sec	72.3	CO	0.0	Umbilical ID #	U50-2	FAIL		H ₂ O					
K Factor (delta H/delta P)	#####	N ₂	80.0	TC ID #s	161			382.1					
Equipment Checks		PRE	POST	Leak Checks	1	2	3	4	5	6	Status		
Tambient		74	80	DGM initial							0.000		
Thermocouples		Y	Y	Vacuum	15	3					15		
Pitots		Y	Y	Leak Rate	0.000	0.000					OK		
Tedlar Bag	NA	Y	Y	DGM final							0.000		
Point #	Clock Time	Test Time	Dry Gas Meter Reading	Velocity Head	Desired Orifice ΔH	Actual Orifice ΔH	Pump Vac.	DGM Inlet Temp	DGM Outlet Temp	Stack Temp	Filter Temp	Imp. Exit Temp	Cond. Exit Temp
	24 hr	min	ft ³	in H ₂ O	in H ₂ O	in H ₂ O	in Hg	°F	°F	°F	°F	°F	°F
B - 12	848	0.0	150.200	1.25	#####	0.50	2	76	76	277	256	65	NA
B - 11		10.0	154.260	1.20	#####	0.50	3	78	77	277	255	55	NA
B - 10		20.0	158.430	1.20	#####	0.50	3	79	77	277	256	56	NA
B - 9		30.0	162.680	1.20	#####	0.50	3	81	78	277	256	57	NA
B - 8		40.0	166.900	1.20	#####	0.50	3	82	79	277	255	60	NA
B - 7		50.0	171.120	0.89	#####	0.50	3	83	81	279	256	61	NA
B - 6		60.0	175.350	0.87	#####	0.50	3	83	81	278	256	61	NA
B - 5		70.0	179.590	0.77	#####	0.50	3	84	82	279	256	57	NA
B - 4		80.0	183.840	0.69	#####	0.50	3	84	82	279	256	58	NA
B - 3		90.0	188.170	0.54	#####	0.50	3	84	83	278	256	59	NA
B - 2		100.0	192.530	0.45	#####	0.50	3	85	83	266	257	54	NA
B - 1		110.0	196.980	0.32	#####	0.50	3	85	83	265	256	54	NA
A - 12	1048	120.0	201.470	1.20	#####	0.50	3	84	84	280	256	63	NA
A - 11	1054	130.0	205.690	1.20	#####	0.50	3	85	84	281	256	56	NA
A - 10		140.0	209.870	1.10	#####	0.50	3	86	84	280	256	57	NA
A - 9		150.0	214.150	1.10	#####	0.50	3	86	85	279	256	58	NA
A - 8		160.0	218.420	1.05	#####	0.50	3	85	85	278	256	60	NA
A - 7		170.0	222.650	0.94	#####	0.50	3	85	84	277	261	58	NA
A - 6		180.0	226.860	0.91	#####	0.50	3	86	84	277	256	58	NA
A - 5		190.0	231.000	0.83	#####	0.50	3	86	84	277	256	60	NA
A - 4		200.0	235.320	0.90	#####	0.50	3	86	84	275	256	61	NA
A - 3		210.0	239.600	0.80	#####	0.50	3	86	85	271	256	58	NA
A - 2		220.0	243.890	0.62	#####	0.50	3	86	85	274	256	58	NA
A - 1		230.0	248.170	0.52	#####	0.50	3	87	85	274	256	59	NA
-	1254	240.0	252.358										
					MAX =>	3							
Average Values	240.0	102.158	0.883		0.50		83	276					

ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD

M4

ISOKINETIC SAMPLING TRAIN RESULTS - METHOD

M4

Client Name	Covanta Projects, Inc.			Operator	RBP
Plant Name	Huntington Resource Recovery Facility			Project #	10731
Sampling Location	Unit 2 FF Outlet			Standard Temperature, °F	68
USE IN AVERAGE OF RUN SET? 1 or 0 =>	1	1			
Run Number		2-O-M4-1	2-O-M4-2		SET AVERAGE
Run Date		08/04/10	08/04/10		
Run Start Time	hh:mm	839	1312		
Run Stop Time	hh:mm	1245	1445		
Sampling Parameters					
Meter Calibration Factor	Y	1.0163	1.0163		
Y _{QA} Calculated by Test Run	Y _{QA}	0.9739	0.9651		
Y _{QA} PASS/FAIL by Test Run	Check	PASS	FAIL		FAIL
Pitot Tube Coefficient	C _p	0.84	0.84		
Stack/Duct Static Pressure	in H ₂ O	-13.20	-13.50		-13.35
Stack Cross-Sectional Area	ft ²	21.648	21.648		21.648
Barometric Pressure	in Hg	29.8	29.8		29.8
Carbon Dioxide Percentage	% CO ₂	7.9	8.1		8.0
Oxygen Percentage	% O ₂	11.4	11.2		11.3
Carbon Monoxide Percentage	% CO	0.0	0.0		0.0
Nitrogen Percentage	% N ₂	80.7	80.7		80.7
Total Water Volume Collected	mL	309.3	134.0		221.7
Sample Volume	ft ³	99.077	41.723		70.400
Average Meter Temperature	°F	87	89		88
Average Stack Temperature	°F	273	272		272
Average Delta H	in H ₂ O	0.50	0.50		0.50
Total Sampling Time	min	240	100		170
Air Flow Parameters					
Volume of Water vapor @ STP	SCF	14.559	6.307		10.433
Volume Metered @ STP	DSCF	96.893	40.644		68.768
Absolute Stack/Duct Pressure	in Hg	28.8	28.8		28.8
Absolute Meter Pressure	in Hg	29.8	29.8		29.8
Calculated Stack Moisture	% H ₂ O	13.1	13.4		13.2
Dry Mole Fraction	decimal	0.869	0.866		0.868
Avg Differential Pressure (Delta P)	in H ₂ O	1.019	1.066		1.042
Dry Gas Molecular Weight	lb/lb-mole	29.72	29.74		29.73
Wet Stack Gas Molecular Weight	lb/lb-mole	28.19	28.17		28.18
Average Stack Gas Velocity	ft/sec	68.82	70.44		69.63
Air Flow Rate Results					
Actual Stack Flow/Minute	ACFM	89,387	91,500		90,443
Dry Standard Stack Flow/Minute	DSCFM	53,973	54,974		54,474

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Carbon Dioxide

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 2 FF Outlet		
Analyzer:	Siemens Ultramat 21P		
Serial Number:	A08-363		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Date	Test Start Time	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/4/10	834	858	8.287	8.0	7	valid	0.287	0.082
2	8/4/10	912	936	8.203	7.9	7	valid	0.303	0.092
3	8/4/10	951	1015	7.970	8.0	7	valid	-0.030	0.001
4	8/4/10	1029	1053	7.707	7.9	7.9	valid	-0.193	0.037
5	8/4/10	1110	1134	8.055	8.0	7	valid	0.055	0.003
6	8/4/10	1151	1215	7.844	7.9	7	valid	-0.056	0.003
7	8/4/10	1227	1251	7.898	7.9	7	valid	-0.002	0.000
8	8/4/10	1312	1336	7.814	7.9	7	valid	-0.086	0.007
9	8/4/10	1349	1413	8.233	8.2	7	valid	0.033	0.001
10	8/4/10	1426	1450	8.085	8.1	7	valid	-0.015	0.000
Averages:				8.010	7.980			0.030	

Standard Deviation	0.1558
Number of Tests	10
t-value	2.262
Confidence Coefficient	0.1114

Absolute Difference = 0.0

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Oxygen

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 2 FF Outlet		
Analyzer:	Servomex 1440		
Serial Number:	01440DIV02/3337		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run	Test #	Test Date	Test Start Time	Test Stop Time	Reference Method	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/4/10	834	858	11.269	11.3	valid	-0.031	0.001	
2	8/4/10	912	936	11.341	11.5	valid	-0.159	0.025	
3	8/4/10	951	1015	11.327	11.2	valid	0.127	0.016	
4	8/4/10	1029	1053	11.816	11.5	valid	0.316	0.100	
5	8/4/10	1110	1134	11.416	11.3	valid	0.116	0.013	
6	8/4/10	1151	1215	11.555	11.4	valid	0.155	0.024	
7	8/4/10	1227	1251	11.527	11.4	valid	0.127	0.016	
8	8/4/10	1312	1336	11.722	11.3	valid	0.422	0.178	
9	8/4/10	1349	1413	11.263	11.1	valid	0.163	0.027	
10	8/4/10	1426	1450	11.358	11.2	valid	0.158	0.025	
Averages:				11.459	11.320		0.139		

Standard Deviation	0.1603
Number of Tests	10
t-value	2.262
Confidence Coefficient	0.1146

Absolute Difference = 0.1

EPA Method 4 for Percent Moisture Determination

Client Name	Covanta Projects, Inc.	Project #	10731
Plant Name	Huntington Resource Rec Fac	Balance Type	Electronic
Plant City, State	East Northport, NY	Balance ID	EB1
Sampling Location	Unit 2 FF Outlet	Operator Name	Blake Cone

Run Number	2-O-M4-1	2-O-M4-2		
Test Date	08/04/10	08/04/10		
Reagent Box ID				

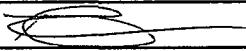
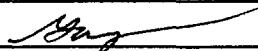
Impinger Reagent	DI	mL	mL	mL	mL
Final Catch Weight	grams	493.0	326.8		
Initial Tare Weight	grams	200.0	200.0		
Net Moisture Caught	grams	293.0	126.8	0.0	0.0

Impinger Reagent		mL	mL	mL	mL
Final Catch Weight	grams				
Initial Tare Weight	grams				
Net Moisture Caught	grams	0.0	0.0	0.0	0.0

Impinger Reagent		mL	mL	mL	mL
Final Catch Weight	grams				
KMnO4 Weight	grams				
KMnO4 g/mL	1.1				
Initial Jar Tare Weight	grams				
Net Moisture Caught	grams	0.0	0.0	0.0	0.0

Silica Gel	SG	grams	grams	grams	grams
Final Catch Weight	grams	286.5	265.4		
Initial Tare Weight	grams	270.2	258.2		
Net Moisture Caught	grams	16.3	7.2	0.0	0.0

Total Catch	grams	309.3	134.0	0.0	0.0
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Signature:		Checked By:	
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ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD

M4

Client Name	Covanta Projects, Inc.				Run #	2-O-M4-1							
Plant Name	Huntington Resource Recovery Facility			Project #	10731		Run Start	839					
Plant City, State	East Northport, NY			Personnel	RBP		Run End	1245					
Test Location	Unit 2 FF Outlet			Tester Signature	<i>on file</i>								
Date of Test	08/04/10			Checked By	<i>John</i>								
Isokinetic Factor Setup			Pressures		Sampling Equipment			Filter ID & Tares	Actuals				
ΔH @ 0.75 SCFM		1.765	Pbar	29.8	Meter Console #	T1			CO ₂				
Meter Calibration Factor		1.0163	Pstatic	-13.20	Ideal Nozzle Diameter	0.234			7.9				
Pitot Tube Coefficient		0.84	Tstd, °F	68	Nozzle #	NA			O ₂				
Estimated DGM Temp		85	Pstd	29.92	Actual Nozzle Diameter	NA	XAD ID & Tares		11.4				
Estimated Stack Temp or M2 Avg.		280	Diluent		Probe Lgth/ID #	6'	161		CO				
Estimated Delta P or M2 Avg.		1.10	Estimates		Liner Material	BG	Y _{qa}		0.0				
Estimated Moisture Content		16.0	CO ₂	7.5	Filter Box #	HB3	0.9739		N ₂				
Estimated Dry Molecular Weight		29.70	O ₂	12.5	Cold Box ID #	CB20	4.17%		80.7				
Estimated Velocity, ft/sec		72.3	CO	0.0	Umbilical ID #	U50-2	PASS		H ₂ O				
K Factor (delta H/delta P)		#####	N ₂	80.0	TC ID #s	161			309.3				
Equipment Checks	PRE	POST	Leak Checks		1	2	3	4	5	6	Status		
Tambient	77	81	DGM initial								0.000		
Thermocouples	Y	Y	Vacuum		15	6					15		
Pitots	Y	Y	Leak Rate		0.000	0.002					OK		
Tedlar Bag	NA	Y	DGM final								0.000		
Point #	Clock Time	Test Time	Dry Gas Meter Reading	Velocity Head	Desired Orifice ΔH	Actual Orifice ΔH	Pump Vac.	DGM Inlet Temp	DGM Outlet Temp	Stack Temp	Filter Temp	Imp. Exit Temp	Cond. Exit Temp
	24 hr	min	ft ³	in H ₂ O	in H ₂ O	in H ₂ O	in Hg	°F	°F	°F	°F	°F	°F
B - 12	839	0.0	827.361	1.60	#####	0.50	5	83	83	274	257	66	NA
B - 11		10.0	831.350	1.50	#####	0.50	6	84	83	274	258	60	NA
B - 10		20.0	835.520	1.30	#####	0.50	6	86	83	272	257	56	NA
B - 9		30.0	839.700	1.20	#####	0.50	6	87	85	273	258	56	NA
B - 8		40.0	843.850	1.25	#####	0.50	6	88	84	274	257	56	NA
B - 7		50.0	848.030	0.94	#####	0.50	6	88	85	274	258	59	NA
B - 6		60.0	852.230	0.95	#####	0.50	6	87	85	273	257	59	NA
B - 5		70.0	856.300	0.81	#####	0.50	6	87	85	274	257	60	NA
B - 4		80.0	860.430	0.80	#####	0.50	6	87	85	271	257	61	NA
B - 3		90.0	864.620	0.78	#####	0.50	6	87	85	270	257	61	NA
B - 2		100.0	868.770	0.87	#####	0.50	6	88	85	268	258	61	NA
B - 1		110.0	872.920	0.71	#####	0.50	6	88	85	266	257	66	NA
A - 12	1039	120.0	877.160	1.10	#####	0.50	6	87	85	273	257	60	NA
A - 11	1045	130.0	881.280	1.20	#####	0.50	6	87	86	274	258	58	NA
A - 10		140.0	885.420	1.15	#####	0.50	6	88	86	273	257	54	NA
A - 9		150.0	889.570	1.15	#####	0.50	6	89	86	272	257	55	NA
A - 8		160.0	893.770	1.10	#####	0.50	6	89	86	275	257	56	NA
A - 7		170.0	897.880	1.20	#####	0.50	6	90	87	272	258	59	NA
A - 6		180.0	901.980	1.10	#####	0.50	6	90	88	275	257	59	NA
A - 5		190.0	906.070	1.00	#####	0.50	6	91	88	276	257	59	NA
A - 4		200.0	910.190	0.96	#####	0.50	6	91	89	274	257	59	NA
A - 3		210.0	914.280	0.90	#####	0.50	6	91	89	271	257	58	NA
A - 2		220.0	918.200	0.64	#####	0.50	6	90	89	274	257	52	NA
A - 1		230.0	922.330	0.60	#####	0.50	6	90	89	268	257	53	NA
-	1245	240.0	926.438										
					MAX =>	6							
Average Values	240.0	99.077	1.019		0.50			87	273				

ISOkinetic Sampling Train Datasheet - Method

M4

ISOKINETIC SAMPLING TRAIN RESULTS - METHOD

M4

Client Name	Covanta Projects, Inc.	Operator	RBP
Plant Name	Huntington Resource Recovery Facility	Project #	10731
Sampling Location	Unit 3 FF Outlet	Standard Temperature, °F	68

USE IN AVERAGE OF RUN SET? 1 or 0 =>	1	1		SET AVERAGE
Run Number		3-O-M4-1	3-O-M4-2	
Run Date		08/06/10	08/06/10	
Run Start Time	hh:mm	720	1134	
Run Stop Time	hh:mm	1124	1334	

Sampling Parameters

Meter Calibration Factor	Y	0.9984	0.9984	
Y _{QA} Calculated by Test Run	Y _{QA}	1.0275	1.0412	
Y _{QA} PASS/FAIL by Test Run	Check	PASS	PASS	PASS
Pitot Tube Coefficient	C _p	0.84	0.84	
Stack/Duct Static Pressure	in H ₂ O	-13.70	-13.60	-13.65
Stack Cross-Sectional Area	ft ²	21.65	21.65	21.65
Barometric Pressure	in Hg	29.8	29.8	29.8
Carbon Dioxide Percentage	% CO ₂	8.1	8.1	8.1
Oxygen Percentage	% O ₂	11.5	11.4	11.5
Carbon Monoxide Percentage	% CO	0.0	0.0	0.0
Nitrogen Percentage	% N ₂	80.4	80.5	80.5
Total Water Volume Collected	mL	334.7	185.0	259.9
Sample Volume	ft ³	99.634	49.354	74.494
Average Meter Temperature	°F	81	86	83
Average Delta H	in H ₂ O	0.50	0.50	0.50
Total Sampling Time	min	240	120	180

Air Flow Parameters

Volume of Water vapor @ STP	SCF	15.754	8.708		12.231
Volume Metered @ STP	DSCF	96.712	47.539		72.126
Absolute Stack/Duct Pressure	in Hg	28.8	28.8		28.8
Absolute Meter Pressure	in Hg	29.8	29.8		29.8
Calculated Stack Moisture	% H ₂ O	14.0	15.5		14.7
Dry Mole Fraction	decimal	0.860	0.845		0.853
Avg Differential Pressure (Delta P)	in H ₂ O	1.138	1.153		1.146
Dry Gas Molecular Weight	lb/lb-mole	29.76	29.75		29.75
Wet Stack Gas Molecular Weight	lb/lb-mole	28.11	27.93		28.02
Average Stack Gas Velocity	ft/sec	73.35	74.03		73.69

Air Flow Rate Results

Actual Stack Flow/Minute	ACFM	95,283	96,169		95,726
Dry Standard Stack Flow/Minute	DSCFM	56,117	55,730		55,924

Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Carbon Dioxide

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 3 FF Outlet		
Analyzer:	Siemens Ultramat 21P		
Serial Number:	A08-368		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run #	Test Date	Test Start Time	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/6/10	729	753	8.336	8.1	void		
2	8/6/10	808	832	8.112	8.0	valid	0.112	0.013
3	8/6/10	843	907	7.983	7.9	valid	0.083	0.007
4	8/6/10	936	1000	7.878	7.9	valid	-0.022	0.000
5	8/6/10	1012	1036	8.121	8.0	valid	0.121	0.015
6	8/6/10	1049	1113	8.105	8.1	valid	0.005	0.000
7	8/6/10	1124	1148	7.939	7.8	valid	0.139	0.019
8	8/6/10	1203	1227	8.231	8.2	valid	0.031	0.001
9	8/6/10	1240	1304	8.206	8.1	valid	0.106	0.011
10	8/6/10	1319	1343	8.121	8.0	valid	0.121	0.015
Averages:				8.077	8.000		0.077	

8.089

Standard Deviation	0.0580
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0446

Absolute Difference = 0.1

**Relative Accuracy - 40CFR60, Appendix B, Performance Specification 3
Oxygen**

Client:	Covanta Projects, Inc.	Project #:	10731
Facility:	Huntington RRF	Operator:	WHH
Test Location:	Unit 3 FF Outlet		
Analyzer:	Servomex 1440		
Serial Number:	01440DIV02/3343		
App. Standard:	NA		
Parameter Units:	percent, %		

Test Run #	Test Date	Test Start Time	Test Stop Time	Reference Method Result	Facility CEM Result	Test Status	Difference (Ref-Fac)	Difference Squared
1	8/6/10	729	753	11.274	11.2	valid	0.074	0.005
2	8/6/10	808	832	11.435	11.4	valid	0.035	0.001
3	8/6/10	843	907	11.538	11.5	valid	0.038	0.001
4	8/6/10	936	1000	11.670	11.5	void		
5	8/6/10	1012	1036	11.442	11.4	valid	0.042	0.002
6	8/6/10	1049	1113	11.518	11.4	valid	0.118	0.014
7	8/6/10	1124	1148	11.499	11.5	valid	-0.001	0.000
8	8/6/10	1203	1227	11.286	11.2	valid	0.086	0.007
9	8/6/10	1240	1304	11.304	11.3	valid	0.004	0.000
10	8/6/10	1319	1343	11.444	11.4	valid	0.044	0.002
Averages:			11.416	11.367		0.049		

Standard Deviation	0.0382
Number of Tests	9
t-value	2.306
Confidence Coefficient	0.0294

Absolute Difference = 0.0

EPA Method 4 for Percent Moisture Determination

Client Name	Covanta Projects, Inc.	Project #	10731
Plant Name	Huntington Resource Rec Fac	Balance Type	Electronic
Plant City, State	East Northport, NY	Balance ID	EB1
Sampling Location	Unit #3 FF Outlet	Operator Name	WHH

Run Number	3-O-M4-1	3-O-M4-2		
Test Date	8/6/10	8/6/10		
Reagent Box ID				

Impinger Reagent	DI	mL	mL	mL	mL
Final Catch Weight	grams	509.0	376.4		
Initial Tare Weight	grams	200.0	200.0		
Net Moisture Caught	grams	309.0	176.4	0.0	0.0

Impinger Reagent		mL	mL	mL	mL
Final Catch Weight	grams				
Initial Tare Weight	grams				
Net Moisture Caught	grams	0.0	0.0	0.0	0.0

Impinger Reagent		mL	mL	mL	mL
Final Catch Weight	grams				
KMnO4 Weight	grams				
KMnO4 g/mL	1.1				
Initial Jar Tare Weight	grams				
Net Moisture Caught	grams	0.0	0.0	0.0	0.0

Silica Gel	SG	grams	grams	grams	grams
Final Catch Weight	grams	274.2	274.0		
Initial Tare Weight	grams	248.5	265.4		
Net Moisture Caught	grams	25.7	8.6	0.0	0.0

Total Catch	grams	334.7	185.0	0.0	0.0
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Signature:	William Hause	Checked By:	D. L. Birth
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ISOkinetic Sampling Train Datasheet - Method

M4

ISOKINETIC SAMPLING TRAIN DATASHEET - METHOD

M4

Client Name	Covanta Projects, Inc.			Run #	3-O-M4-2								
Plant Name	Huntington Resource Recovery Facility		Project #	10731	Run Start	1134							
Plant City, State	East Northport, NY		Personnel	RBP	Run End	1334							
Test Location	Unit 3 FF Outlet		Tester Signature	<i>ON FILE</i> Bill Harris									
Date of Test	08/06/10		Checked By										
Isokinetic Factor Setup		Pressures		Sampling Equipment			Filter ID & Tares	Actuals					
ΔH @ 0.75 SCFM	1.550	Pbar	29.8	Meter Console #	T9			CO ₂					
Meter Calibration Factor	0.9984	Pstatic	-13.60	Ideal Nozzle Diameter	0.234			8.1					
Pitot Tube Coefficient	0.84	Tstd, °F	68	Nozzle #	NA			O ₂					
Estimated DGM Temp	85	Pstd	29.92	Actual Nozzle Diameter	NA	XAD ID & Tares		11.4					
Estimated Stack Temp or M2 Avg.	280	Diluent		Probe Lgth/ID #	6'	161		CO					
Estimated Delta P or M2 Avg.	1.10	Estimates		Liner Material	BG	Y _{qa}		0.0					
Estimated Moisture Content	16.0	CO ₂	7.5	Filter Box #	HB1	1.0412		N ₂					
Estimated Dry Molecular Weight	29.70	O ₂	12.5	Cold Box ID #	CB16	-4.29%		80.5					
Estimated Velocity, ft/sec	72.4	CO	0.0	Umbilical ID #	U50-3	PASS		H ₂ O					
K Factor (delta H/delta P)	#####	N ₂	80.0	TC ID #s	161			185.0					
Equipment Checks	PRE	POST	Leak Checks	1	2	3	4	5	6	Status			
Tambient	82	84	DGM initial							0.000			
Thermocouples	Y	Y	Vacuum	15	3					15			
Pitots	Y	Y	Leak Rate	0.000	0.000					OK			
Tedlar Bag	NA	Y	DGM final							0.000			
Point #	Clock Time	Test Time	Dry Gas Meter Reading	Velocity Head	Desired Orifice ΔH	Actual Orifice ΔH	Pump Vac.	DGM Inlet Temp	DGM Outlet Temp	Stack Temp	Filter Temp	Imp. Exit Temp	Cond. Exit Temp
	24 hr	min	ft ³	in H ₂ O	in H ₂ O	in H ₂ O	in Hg	°F	°F	°F	°F	°F	°F
B - 12	1134	0.0	760.208	1.30	#####	0.50	3	86	85	284	258	66	NA
B - 11		10.0	764.400	1.45	#####	0.50	3	86	85	284	254	62	NA
B - 10		20.0	768.540	1.40	#####	0.50	3	86	84	286	254	55	NA
B - 9		30.0	772.650	1.35	#####	0.50	3	86	84	285	256	55	NA
B - 8		40.0	776.750	1.30	#####	0.50	3	86	85	284	253	55	NA
B - 7		50.0	780.850	1.35	#####	0.50	3	87	85	285	250	55	NA
B - 6		60.0	784.980	1.25	#####	0.50	3	86	85	285	254	55	NA
B - 5		70.0	788.910	1.10	#####	0.50	3	86	85	284	254	55	NA
B - 4		80.0	793.090	0.97	#####	0.50	3	86	84	283	253	55	NA
B - 3		90.0	797.200	0.94	#####	0.50	3	86	84	281	256	52	NA
B - 2		100.0	801.110	0.92	#####	0.50	3	87	85	276	253	51	NA
B - 1		110.0	805.410	0.89	#####	0.50	3	88	86	275	253	51	NA
A - 12	1334	120.0	809.562	1.40	#####					283			
A - 11				1.35	#####					283			
A - 10				1.45	#####					283			
A - 9				1.40	#####					284			
A - 8				1.35	#####					282			
A - 7				1.30	#####					283			
A - 6				1.20	#####					282			
A - 5				0.94	#####					281			
A - 4				0.83	#####					279			
A - 3				0.99	#####					277			
A - 2				0.78	#####					273			
A - 1				0.76	#####					268			
								MAX =>	3				
Average Values	120.0	49.354	1.153		0.50					86	281		

APPENDIX E

Reference Method Calibration Data

NOx Converter Efficiency Test

Operator: Bill Harris
Plant Name: Huntington RRF
Location: Huntington, NY
Date: 8/3/10
Analyzer: Thermo Environmental NOx 10S
Analyzer SN#: 10S-45502-274

NO2/NO Converter Efficiency Gas: 51.8 ppm NO2
NOx Analyzer Response: 51.34 ppm NO2
Converter Efficiency: 99.1 %

EPA EMTIC Guidline Document GD-030 requires NO2 to NO conversion must be >90%.

Interference Test

Analyzer Type: TECO Model 48C
Serial Number: 48CHL60783-326

Span: 100
Date: 25-Apr-98

Parameter	Concentration		Analyzer Response	% of Span
O2/N2	19.99	%	0.1	0.1
SO2/N2	956.8	ppm	0.0	0.0
NOx/N2	442.0	ppm	0.0	0.0
CO2/N2	17.35	%	0.8	0.8
Totals				0.9

Specification: Sum of Interference Responses Must Not Exceed
2% of Span

TESTAR, INC.

Interference Test

Analyzer Type: TELEDYNE API 300EM
Serial Number: 224

Span: 100
Date: 20-Jul-07

CO/CO2 ANALYZER (Measuring CO2)

Parameter	Concentration		Analyzer Response	% of Span
O2/N2	22.00	%	0.0	0.0
SO2/N2	487.0	ppm	0.0	0.0
NOx/N2	486.0	ppm	0.0	0.0
CO/N2	95	%	0.0	0.0
			Totals	0.0

Specification: Sum of Interference Responses Must Not Exceed
2% of Span

TESTAR, INC.

Interference Test

Analyzer Type: Western Research
Serial Number: 721M-8064-6
Monitor Type: Sulfur Dioxide

Span: 500
Date: 25-Apr-98

Parameter	Concentration		Analyzer Response	% of Span
CO/N2	891.0	ppm	0.0	0.0
O2/N2	19.99	ppm	0.0	0.0
NOx/N2	442.0	%	0.0	0.0
CO2/N2	17.35	%	0.0	0.0
		Totals		0.0

Specification: Sum of Interference Responses Must Not Exceed
2% of Span

TESTAR, INC.

Interference Test

Analyzer Type: Western Research
Serial Number: 721M-8062-2
Monitor Type: Sulfur Dioxide

Span: 500
Date: 25-Apr-98

Parameter	Concentration		Analyzer Response	% of Span
CO/N2	891.0	ppm	0.0	0.0
O2/N2	19.99	ppm	0.0	0.0
NOx/N2	442.0	%	0.0	0.0
CO2/N2	17.35	%	0.0	0.0
			Totals	0.0

Specification: Sum of Interference Responses Must Not Exceed
2% of Span

TESTAR, INC.

Interference Test

Analyzer Type: Servomex 1420 O2
Serial Number: 1420/B180

Span: 25
Date: 25-Apr-98

Parameter	Concentration		Analyzer Response	% of Span
CO/N2	891.0	ppm	0.0	0.0
SO2/N2	956.8	ppm	0.0	0.0
NOx/N2	442.0	%	0.1	0.4
CO2/N2	17.35	%	0.0	0.0
			Totals	0.4

Specification: Sum of Interference Responses Must Not Exceed
2% of Span

TESTAR, INC.

Interference Test

Analyzer Type: California Analytical 100P
Serial Number: 8K12007

Span: 25
Date: 1-Jun-09

Parameter	Concentration		Analyzer Response	% of Span
CO/N2	92.08	ppm	0.0	0.0
SO2/N2	487	ppm	0.0	0.0
NOx/N2	244.9	%	0.0	0.0
CO2/N2	17.79	%	0.0	0.0
		Totals		0.0

Specification: Sum of Interference Responses Must Not Exceed
2% of Span

TESTAR, INC.

Interference Test

Analyzer Type: TECO 10S
Serial Number: 10S-45502-274

Span: 500
Date: 25-Apr-98

Parameter	Concentration		Analyzer Response	% of Span
CO/N2	891.0	ppm	0.0	0.0
SO2/N2	956.8	ppm	0.0	0.0
CO2	17.35	%	0.0	0.0
O2	19.99	%	0.0	0.0
			Totals	0.0

Specification: Sum of Interference Responses Must Not Exceed
2% of Span

TESTAR, INC.

Interference Test

Analyzer Type: CALIF ANALYTICAL ZRH
Serial Number: A6J836T

Span: 20
Date: 20-Jul-07

Parameter	Concentration		Analyzer Response	% of Span
CO/N2	95.0	ppm	0.0	0.0
SO2/N2	487.0	ppm	0.0	0.0
NOx/N2	486.0	ppm	0.0	0.0
O2	22.0	%	0.0	0.0
			Totals	0.0

Specification: Sum of Interference Responses Must Not Exceed
2% of Span

TESTAR, INC.

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Airgas Specialty Gases
630 United Drive
Durham, NC 27713
Phone (919) 544-3773
Fax (919) 544-3774
www.airgas.com

Part Number: E03NI81E15A37P2 Reference Number: 122-124219176-5
Cylinder Number: CC92828 Cylinder Volume: 150 Cu.Ft.
Laboratory: ASG - Durham - NC Cylinder Pressure: 2015 PSIG
Analysis Date: May 11, 2010 Valve Outlet: 590

Expiration Date: May 11, 2013

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 150 psig, i.e. 1 Mega Pascal

ANALYTICAL RESULTS				
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
CARBON DIOXIDE	9.000 %	8.960 %	G1	+/- 1% NIST Traceable
OXYGEN	10.00 %	9.994 %	G1	+/- 1% NIST Traceable
NITROGEN	Balance			

CALIBRATION STANDARDS				
Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	061201	CC195749	9.898% OXYGEN/NITROGEN	Oct 02, 2012
NTRM	090606	CC262105	9.921% CARBON DIOXIDE/NITROGEN	Apr 10, 2013

ANALYTICAL EQUIPMENT				
Instrument/Make/Model	Analytical Principle			Last Multipoint Calibration
Horiba VIA-510 CO2	Infrared			Apr 20, 2010
Horiba MPA-510 O2 (0-25%)	Paramagnetic			Apr 20, 2010

Triad Data Available Upon Request

Notes: ANW Part # 781221

Daniel Main
Approved for Release

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Airgas
630 United Drive
Durham, NC 27713
(919) 544-3772
Fax (919) 544-6297
www.airgas.com

Part Number: E03NI60E15A02E6 Reference Number: 122-124174756-1
Cylinder Number: CC252375 Cylinder Volume: 158 Cu.Ft.
Laboratory: ASG - Durham - NC Cylinder Pressure: 2015 PSIG
Analysis Date: Apr 15, 2009 Valve Outlet: 590

Expiration Date: Apr 15, 2012

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 150 psig.i.e. 1 Mega Pascal

ANALYTICAL RESULTS				
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
CARBON DIOXIDE	18.00 %	18.05 %	G1	+/- 1% NIST Traceable
OXYGEN	22.00 %	20.90 %	G1	+/- 1% NIST Traceable
NITROGEN	Balance			

CALIBRATION STANDARDS				
Type	Lot ID	Cylinder No.	Concentration	Expiration Date
NTRM	060608	CC207968	22.51% OXYGEN/NITROGEN	May 01, 2010
NTRM	080613	CC254471	20.09% CARBON DIOXIDE/NITROGEN	Jul 15, 2012

ANALYTICAL EQUIPMENT				
Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration	 	
Horiba VIA-510 CO2 (0.5-20%)	Infrared	Mar 31, 2009		
Horiba MPA-510 O2 (0.5-25%)	Paramagnetic	Mar 31, 2009		

Triad Data Available Upon Request

Notes: ANW Part#781381

QA Approval

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Airgas Specialty Gases
630 United Drive
Durham, NC 27713
Phone (919) 544-3773
Fax (919) 544-3774
www.airgas.com

Part Number: E03NI81E15A37P2 Reference Number: 122-124218172-8
Cylinder Number: CC332317 Cylinder Volume: 150 Cu.Ft.
Laboratory: ASG - Durham - NC Cylinder Pressure: 2015 PSIG
Analysis Date: May 04, 2010 Valve Outlet: 590

Expiration Date: May 04, 2013

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 150 psig.i.e. 1 Mega Pascal

ANALYTICAL RESULTS				
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
CARBON DIOXIDE	9.000 %	9.031 %	G1	+/- 1% NIST Traceable
OXYGEN	10.00 %	9.988 %	G1	+/- 1% NIST Traceable
NITROGEN	Balance			

CALIBRATION STANDARDS				
Type	Lot ID	Cylinder No.	Concentration	Expiration Date
NTRM	061201	CC195611	9.898% OXYGEN/NITROGEN	Oct 02, 2012
NTRM	090606	CC263024	9.921% CARBON DIOXIDE/NITROGEN	Apr 10, 2013
ANALYTICAL EQUIPMENT				
Instrument/Make/Model	Analytical Principle			Last Multipoint Calibration
Horiba VIA-510 CO ₂	Infrared			Apr 20, 2010
Horiba MPA-510 O ₂ (0-25%)	Paramagnetic			Apr 20, 2010

Triad Data Available Upon Request

Notes:ANWPN 781221



Approved for Release

**CERTIFICATE OF ANALYSIS
Grade of Product: EPA Protocol**

Airgas Specialty Gases
630 United Drive
Durham, NC 27713
Phone (919) 544-3773
Fax (919) 544-3774
www.airgas.com

Part Number: E02NI99E15AC3D3 Reference Number: 122-124219176-4
Cylinder Number: CC321220 Cylinder Volume: 144 Cu.Ft.
Laboratory: ASG - Durham - NC Cylinder Pressure: 2015 PSIG
Analysis Date: May 18, 2010 Valve Outlet: 660

Expiration Date: May 18, 2012

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 150 psig.i.e. 1 Mega Pascal

ANALYTICAL RESULTS				
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
SULFUR DIOXIDE	47.50 PPM	48.66 PPM	G1	+/- 1% NIST Traceable
NITROGEN	Balance			
CALIBRATION STANDARDS				
Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	080601	CC237945	50.6PPM SULFUR DIOXIDE/NITROGEN	Dec 15, 2011
ANALYTICAL EQUIPMENT				
Instrument/Make/Model	Analytical Principle			Last Multipoint Calibration
Nicolet 6700 #2 SO2	FTIR			May 13, 2010

Triad Data Available Upon Request

Notes: ANWPN 782247

Approved for Release



CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Airgas
630 Unified Drive
Durham, NC 27713
(919) 544-3772
Fax (919) 544-6297
www.airgas.com

Part Number: E02NI99E15AC3E8 Reference Number: 122-124175049-4
 Cylinder Number: CC61542 Cylinder Volume: 144 Cu.Ft.
 Laboratory: ASG - Durham - NC Cylinder Pressure: 2015 PSIG
 Analysis Date: Apr 29, 2009 Valve Outlet: 660

Expiration Date: Apr 29, 2011

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 150 psig, i.e. 1 Mega Pascal

ANALYTICAL RESULTS					
Component	Requested	Actual	Protocol	Total Relative Uncertainty	
Concentration	Concentration	Concentration	Method	Uncertainty	
SULFUR DIOXIDE	84.67 PPM	84.67 PPM	G	+/- 2% NIST Traceable	
NITROGEN	15.33 PPM	15.33 PPM	G	+/- 2% NIST Traceable	

CALIBRATION STANDARDS

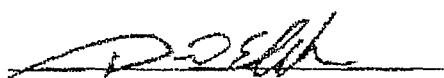
Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	080615	CC255869	94.67PPM SULFUR DIOXIDE/NITROGEN	Oct 15, 2012

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Niclet 6700 SO2	FTIR	Apr 23, 2009

Triad Data Available Upon Request

Notes: ANW Part # 782304


QA Approval

**CERTIFICATE OF ANALYSIS
Grade of Product: EPA Protocol**

Part Number: E02NI99E15A0262
Cylinder Number: SG9154119BAL
Laboratory: ASG - Durham - NC
Analysis Date: Mar 27, 2010

Reference Number: 122-124212746-5
Cylinder Volume: 144 Cu.Ft.
Cylinder Pressure: 2015 PSIG
Valve Outlet: 660

Expiration Date: Mar 27, 2012

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630 United Drive
Durham, NC 27713
Phone (919) 544-3773
Fax (919) 544-3774
www.airgas.com

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 150 psig, i.e. 1 Mega Pascal

ANALYTICAL RESULTS				
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
SULFUR DIOXIDE	240.0 PPM	242.2 PPM	G1	+/-1% NIST Traceable
NITROGEN	Balance			
CALIBRATION STANDARDS				
Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	080616	CC255792	247PPM SULFUR DIOXIDE/NITROGEN	Oct 15, 2012
ANALYTICAL EQUIPMENT				
Instrument/Make/Model	Analytical Principle			Last Multipoint Calibration
Nicolet 6700 #2 SO2	FTIR			Mar 10, 2010

Triad Data Available Upon Request

Notes: ANW Part # 782257


Approved for Release

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Airgas
630 United Drive
Durham, NC 27713
(919) 544-3772
Fax (919) 544-6297
www.airgas.com

Part Number: E02NI99E15A2656 Reference Number: 122-124179045-1
Cylinder Number: XC022664B Cylinder Volume: 144 Cu.Ft.
Laboratory: ASG - Durham - NC Cylinder Pressure: 2015 PSIG
Analysis Date: Jun 04, 2009 Valve Outlet: 660

Expiration Date: Jun 04, 2011

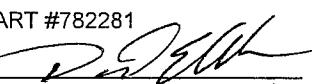
Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 150 psig.i.e. 1 Mega Pascal

ANALYTICAL RESULTS				
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
SULFUR DIOXIDE	485.0 PPM	490.7 PPM	G1	+/- 1% NIST Traceable
NITROGEN	Balance			
CALIBRATION STANDARDS				
Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	060611	CC206009	475.0PPM SULFUR DIOXIDE/NITROGEN	Sep 01, 2010
ANALYTICAL EQUIPMENT				
Instrument/Make/Model	Analytical Principle			Last Multipoint Calibration
Nicolet 6700 SO2	FTIR			May 26, 2009

Triad Data Available Upon Request

Notes: ANW PART #782281


QA Approval

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Airgas Specialty Gases
 630 United Drive
 Durham, NC 27713
 Phone (919) 544-3773
 Fax (919) 544-3774
www.airgas.com

Part Number: E03NI99E33AC4R2 Reference Number: 122-124210833-2
 Cylinder Number: FF10803 Cylinder Volume: 32 Cu.Ft.
 Laboratory: ASG - Durham - NC Cylinder Pressure: 2217 PSIG
 Analysis Date: Mar 16, 2010 Valve Outlet: 660

Expiration Date: Sep 16, 2010

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 150 psig, i.e. 1 Mega Pascal

ANALYTICAL RESULTS				
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
NITROGEN DIOXIDE	55.00 PPM	54.80 PPM	G1	+/- 1% NIST Traceable
NITROGEN	Balance			
CALIBRATION STANDARDS				
Type	Lot ID	Cylinder No	Concentration	Expiration Date
GMIS	GMIS	CC300752	103.4PPM NITROGEN DIOXIDE/NITROGEN	Oct 06, 2011
ANALYTICAL EQUIPMENT				
Instrument/Make/Model	Analytical Principle			Last Multipoint Calibration
California Instruments NH3, NOx (0-100)	Chemiluminescence			Mar 11, 2010

Triad Data Available Upon Request

Notes: ANW Part # 780889

Amber Mains

Approved for Release

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Airgas Specialty Gases
 630 United Drive
 Durham, NC 27713
 Phone (919) 544-3773
 Fax (919) 544-3774
www.airgas.com

Part Number:	E02NI99E15A0936	Reference Number:	122-124219176-3
Cylinder Number:	CC331862	Cylinder Volume:	144 Cu.Ft.
Laboratory:	ASG - Durham - NC	Cylinder Pressure:	2015 PSIG
Analysis Date:	May 17, 2010	Valve Outlet:	660

Expiration Date: May 17, 2012

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 150 psig.i.e. 1 Mega Pascal

ANALYTICAL RESULTS				
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
NITRIC OXIDE	240.0 PPM	236.4 PPM	G1	+/- 1% NIST Traceable
NITROGEN	Balance			

Total oxides of nitrogen 236.6 PPM For Reference Only

CALIBRATION STANDARDS				
Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	090603	CC288270	250.6PPM NITRIC OXIDE/NITROGEN	Feb 01, 2011

ANALYTICAL EQUIPMENT				
Instrument/Make/Model	Analytical Principle			Last Multipoint Calibration
Nicolet 6700 #2 NO	FTIR			May 13, 2010

Triad Data Available Upon Request

Notes:ANWPN 780709



Approved for Release

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Airgas
630 United Drive
Durham, NC 27713
(919) 544-3772
Fax (919) 544-6297
www.airgas.com

Part Number: E02NI99E33AC3L2 Reference Number: 122-1241814-36-1
Cylinder Number: FF747 Cylinder Volume: 32 Cu.Ft.
Laboratory: ASG - Durham - NC Cylinder Pressure: 2217 PSIG
Analysis Date: Jun 30, 2009 Valve Outlet: 660

Expiration Date: Jun 30, 2011

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 150 psig.i.e. 1 Mega Pascal

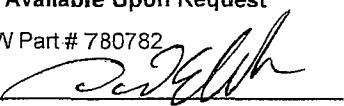
ANALYTICAL RESULTS				
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
NITRIC OXIDE	485.0 PPM	482.11 PPM	G1	+/- 1% NIST Traceable
NITROGEN	Balance			

Total oxides of nitrogen 482.4 PPM For Reference Only

CALIBRATION STANDARDS				
Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	060603	CC207616	490PPM NITRIC OXIDE/NITROGEN	Jan 01, 2010
ANALYTICAL EQUIPMENT				
Instrument/Make/Model	Analytical Principle			Last Multipoint Calibration
Nicolet 6700 NO	FTIR			Jun 22, 2009

Triad Data Available Upon Request

Notes: ANW Part # 780782


QA Approval

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Airgas
630 United Drive
Durham, NC 27713
(919) 544-3772
Fax (919) 544-6297
www.airgas.com

Part Number: E02NI99E15A0223 Reference Number: 122-124187040-2
Cylinder Number: SG9168169BAL Cylinder Volume: 144 Cu.Ft.
Laboratory: ASG - Durham - NC Cylinder Pressure: 2015 PSIG
Analysis Date: Aug 14, 2009 Valve Outlet: 350

Expiration Date: Aug 14, 2012

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 150 psig, i.e. 1 Mega Pascal

ANALYTICAL RESULTS				
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
CARBON MONOXIDE	45.00 PPM	45.070 PPM	G1	+/- 1% NIST Traceable
NITROGEN	Balance			
CALIBRATION STANDARDS				
Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	080602	CC255858	51.26PPM CARBON MONOXIDE/NITROGEN	Jan 15, 2012
ANALYTICAL EQUIPMENT				
Instrument/Make/Model	Analytical Principle			Last Multipoint Calibration
Nicolet 6700 CO	FTIR			Jul 27, 2009

Triad Data Available Upon Request

Notes: ANW PART #780481

QA Approval

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Airgas
630 United Drive
Durham, NC 27713
(919) 544-3772
Fax (919) 544-6297
www.airgas.com

Part Number: E02NI99E33AC2S2 Reference Number: 122-124173801-1
Cylinder Number: FF7925 Cylinder Volume: 28 Cu.Ft.
Laboratory: ASG - Durham - NC Cylinder Pressure: 1984 PSIG
Analysis Date: Apr 22, 2009 Valve Outlet: 660

Expiration Date: Apr 22, 2012

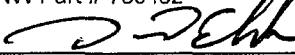
Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 150 psig, i.e. 1 Mega Pascal

ANALYTICAL RESULTS				
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
CARBON MONOXIDE	92.50 PPM	89.72 PPM	G1	+/- 1% NIST Traceable
NITROGEN	Balance			
CALIBRATION STANDARDS				
Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	01520401	CC179908	99.49PPM CARBON MONOXIDE/NITROGEN	Feb 02, 2013
NTRM	05120413	CC180365	99.49PPM CARBON MONOXIDE/NITROGEN	Feb 02, 2013
ANALYTICAL EQUIPMENT				
Instrument/Make/Model	Analytical Principle			Last Multipoint Calibration
Nicolet 6700 CO	FTIR			Mar 24, 2009

Triad Data Available Upon Request

Notes: ANW Part # 780482



QA Approval

METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

METER CONSOLE #: **T1**
DGM SERIAL #: **8808684**

DATE: **07/08/10**

CRITICAL ORIFICE SET SERIAL #: **1345**

BAROMETRIC PRESSURE (in Hg): **29.3** **29.3** **29.3**
INITIAL FINAL AVG (P_{bar})

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT ³)			TEMPERATURES °F						ELAPSED TIME (MIN) θ	DGM ΔH (in H ₂ O)	(1) V _m (STD)	(2) V _{cr} (STD)	(3) Y	Y CHECK < 0.02 VAR.	ΔH _θ ΔH CHECK < 0.2 VAR.
				INITIAL	FINAL	NET (V _m)	AMBIENT	DGM INLET	DGM OUTLET	DGM AVG	INITIAL	FINAL							
23	1	0.6385	18	533.000	538.417	5.417	90	94	95	90	90	92.3	6.50	2.200	5.101	5.187	1.0169	OK	1.83 OK
23	2	0.6385	18	538.417	543.828	5.411	91	95	95	90	91	92.8	6.50	2.200	5.090	5.182	1.0180	OK	1.83 OK
23	3	0.6385	18	543.828	549.264	5.436	91	95	96	91	91	93.3	6.50	2.200	5.109	5.182	1.0142	OK	1.83 OK
18	1	0.4913	20	550.000	555.181	5.181	92	95	95	91	92	93.3	8.00	1.300	AVERAGES =>		1.0163	1.8306	
18	2	0.4913	20	555.181	560.351	5.170	92	95	95	92	92	93.5	8.00	1.300	4.859	4.903	1.0091	OK	1.83 OK
18	3	0.4913	20	560.351	565.536	5.185	92	95	95	92	92	93.5	8.00	1.300	4.846	4.903	1.0117	OK	1.82 OK
12	1	0.3080	19	566.000	571.030	5.030	92	95	94	92	93	93.5	12.50	0.460	4.860	4.903	1.0088	OK	1.82 OK
12	2	0.3080	19	571.030	576.050	5.020	92	94	94	93	93	93.5	12.50	0.460	AVERAGES =>		1.0099	1.8252	
12	3	0.3080	19	576.050	581.066	5.016	92	94	95	93	93	93.8	12.50	0.460	4.705	4.803	1.0208	OK	1.64 OK
ALL VOLUMES GREATER THAN 5 ACF?				OK															
AVERAGE DRY GAS METER CALIBRATION FACTOR, Y =																		1.0163	
AVERAGE ΔH _θ =																		1.765	

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:

The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

$$(1) \quad V_m (\text{std}) = K_1 V_m \frac{P_{\text{bar}} + (\Delta H/13.6)}{T_m} \quad = \text{Net volume of gas sample passed through DGM, corrected to standard conditions}$$

$K_1 = 17.64 \text{ }^{\circ}\text{R/in. Hg (English)}, 0.3858 \text{ }^{\circ}\text{K/mm Hg (Metric)}$

$T_m = \text{Absolute DGM avg. temperature (}^{\circ}\text{R - English, }^{\circ}\text{K - Metric)}$

$$(2) \quad V_{cr} (\text{std}) = K' \sqrt{\frac{P_{\text{bar}} \theta}{T_{\text{amb}}}} \quad = \text{Volume of gas sample passed through the critical orifice, corrected to standard conditions}$$

$T_{\text{amb}} = \text{Absolute ambient temperature (}^{\circ}\text{R - English, }^{\circ}\text{K - Metric)}$

$K' = \text{Average K' factor from Critical Orifice Calibration}$

$$(3) \quad Y = \frac{V_{cr} (\text{std})}{V_m (\text{std})} \quad = \text{DGM calibration factor}$$

$$\Delta H_{\theta} = \left(\frac{0.75 \theta}{V_{cr} (\text{std})} \right)^2 \left(\frac{\Delta H}{V_m (\text{std})} \right)$$

ORIFICE CHECKS: IF Y VARIATION EXCEEDS 2.00%, RECALIBRATE ORIFICE	GAMMA	RESULT	STATUS
	GAMMA 1	0.01	OK
	GAMMA 2	-0.63	OK
	GAMMA 3	0.62	OK

- 1) Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
- 2) Record barometric pressure before and after calibration procedure.
- 3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
- 4) Record readings below, shaded columns are automatically calculated.

METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

METER CONSOLE #: **T5**
DGM SERIAL #: **13276859**

DATE: **07/08/10**

CRITICAL ORIFICE SET SERIAL #: **1345**

BAROMETRIC PRESSURE (in Hg): **29.3** **29.3** **29.3**
INITIAL FINAL AVG (P_{bar})

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT ³)			TEMPERATURES °F						ELAPSED TIME (MIN) θ	DGM ΔH (in H ₂ O)	(1) V _m (STD)	(2) V _{cr} (STD)	(3) Y	Y CHECK < 0.02 VAR.	ΔH _ε < 0.2 VAR.	
		INITIAL	FINAL	NET (V _m)	AMBIENT	DGM INLET	DGM OUTLET	DGM AVG	INITIAL	FINAL	INITIAL	FINAL								
23	1	0.6385	19	769.500	774.520	5.020	85	82	84	81	82	82.3	6.00	2.200	4.814	4.810	0.9991	OK	1.85	OK
23	2	0.6385	19	774.520	779.534	5.014	86	84	85	82	82	83.3	6.00	2.200	4.799	4.805	1.0012	OK	1.85	OK
23	3	0.6385	19	779.534	784.563	5.029	86	85	86	82	83	84.0	6.00	2.200	4.807	4.805	0.9996	OK	1.84	OK
18	1	0.4913	19	785.500	790.686	5.186	86	86	87	83	84	85.0	8.00	1.250	AVERAGES =>				0.9999	1.8460
18	2	0.4913	19	790.686	795.860	5.174	87	87	88	84	85	86.0	8.00	1.250	4.936	4.930	0.9987	OK	1.76	OK
18	3	0.4913	19	795.860	801.053	5.193	87	88	89	85	86	87.0	8.00	1.250	4.916	4.925	1.0019	OK	1.76	OK
12	1	0.3080	19	801.500	806.546	5.046	88	89	90	86	87	88.0	12.50	0.450	4.925	4.925	1.0001	OK	1.76	OK
12	2	0.3080	19	806.546	811.600	5.054	90	90	91	87	88	89.0	12.50	0.450	AVERAGES =>				1.0002	1.7614
12	3	0.3080	19	811.600	816.690	5.090	90	91	91	88	89	89.8	12.50	0.450	4.767	4.820	1.0111	OK	1.61	OK
ALL VOLUMES GREATER THAN 5 ACF?				OK				AVERAGE DRY GAS METER CALIBRATION FACTOR, Y =												1.0028

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:

The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

$$(1) \quad V_m (\text{std}) = K_1 V_m \frac{P_{\text{bar}} + (\Delta H / 13.6)}{T_m} = \text{Net volume of gas sample passed through DGM, corrected to standard conditions}$$

$K_1 = 17.64 \text{ ^{\circ}R/in. Hg (English), } 0.3858 \text{ ^{\circ}K/mm Hg (Metric)}$

$T_m = \text{Absolute DGM avg. temperature (}^{\circ}\text{R - English, }^{\circ}\text{K - Metric)}$

$$(2) \quad V_{cr} (\text{std}) = K' \sqrt{\frac{P_{\text{bar}} \theta}{T_{\text{amb}}}} = \text{Volume of gas sample passed through the critical orifice, corrected to standard conditions}$$

$T_{\text{amb}} = \text{Absolute ambient temperature (}^{\circ}\text{R - English, }^{\circ}\text{K - Metric)}$

$K' = \text{Average K' factor from Critical Orifice Calibration}$

$$(3) \quad Y = \frac{V_{cr} (\text{std})}{V_m (\text{std})} = \text{DGM calibration factor}$$

$$\Delta H_{\epsilon} = \left(\frac{0.75 \theta}{V_{cr} (\text{std})} \right)^2 \left(\frac{\Delta H}{V_m (\text{std})} \right)$$

ORIFICE CHECKS:	GAMMA	RESULT	STATUS
IF Y VARIATION EXCEEDS 2.00%,			
RECALIBRATE ORIFICE	GAMMA 1	-0.28	OK
	GAMMA 2	-0.25	OK
	GAMMA 3	0.53	OK

- Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
- Record barometric pressure before and after calibration procedure.
- Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
- Record readings below, shaded columns are automatically calculated.



METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

METER CONSOLE #: **T9**
DGM SERIAL #: **15214915**

DATE: **07/02/10**

CRITICAL ORIFICE SET SERIAL #: **1345**

INITIAL FINAL AVG (P_{bar})
BAROMETRIC PRESSURE (in Hg): **29.6** **29.6** **29.6**

ORIFICE #	RUN #	K FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT ³)			TEMPERATURES °F				ELAPSED TIME (MIN) θ	DGM ΔH (in H ₂ O)	(1) V _m (STD)	(2) V _{cr} (STD)	(3) Y	Y CHECK < 0.02 VAR.	ΔH CHECK ΔH _θ < 0.2 VAR.			
		INITIAL	FINAL	NET (V _m)	AMBIENT	DGM INLET INITIAL FINAL	DGM OUTLET INITIAL FINAL	DGM AVG	AMBIENT	DGM INLET INITIAL FINAL										
23	1	0.6385	19	428.500	433.594	5.094	83	81	82	80	80	80.8	6.00	1.800	4.944	4.868	0.9847	OK	1.49	OK
23	2	0.6385	19	433.594	438.672	5.078	83	82	83	80	81	81.5	6.00	1.800	4.921	4.868	0.9891	OK	1.49	OK
23	3	0.6385	19	438.672	443.756	5.084	83	83	84	81	81	82.3	6.00	1.800	4.920	4.868	0.9893	OK	1.49	OK
18	1	0.4913	20	444.500	449.702	5.202	83	84	84	81	82	82.8	8.00	1.150	AVERAGES =>		0.9877	1.4908		
18	2	0.4913	20	449.702	454.882	5.180	84	84	85	82	82	83.3	8.00	1.150	5.022	4.994	0.9945	OK	1.60	OK
18	3	0.4913	20	454.882	460.092	5.210	84	85	86	82	82	83.8	8.00	1.150	4.996	4.989	0.9987	OK	1.60	OK
12	1	0.3080	20	460.500	465.517	5.017	84	85	85	83	83	84.0	12.50	0.440	5.020	4.989	0.9939	OK	1.60	OK
12	2	0.3080	20	465.517	470.542	5.025	84	85	85	83	83	84.0	12.50	0.440	AVERAGES =>		0.9957	1.6029		
12	3	0.3080	20	470.542	475.574	5.032	84	85	85	83	84	84.3	12.50	0.440	4.823	4.887	1.0133	OK	1.56	OK
ALL VOLUMES GREATER THAN 5 ACF?				OK	AVERAGE DRY GAS METER CALIBRATION FACTOR, Y =												0.9984			

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:

The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

$$(1) \quad V_m (\text{std}) = K_f V_m \frac{P_{\text{bar}} + (\Delta H/13.6)}{T_m} = \text{Net volume of gas sample passed through DGM, corrected to standard conditions}$$

K_f = 17.64 °R/in. Hg (English), 0.3858 °K/mm Hg (Metric)

T_m = Absolute DGM avg. temperature (°R - English, °K - Metric)

$$(2) \quad V_{cr} (\text{std}) = K' \sqrt{\frac{P_{\text{bar}} \theta}{T_{\text{amb}}}} = \text{Volume of gas sample passed through the critical orifice, corrected to standard conditions}$$

T_{amb} = Absolute ambient temperature (°R - English, °K - Metric)

K' = Average K' factor from Critical Orifice Calibration

$$(3) \quad Y = \frac{V_{cr} (\text{std})}{V_m (\text{std})} = \text{DGM calibration factor}$$

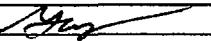
$$\Delta H_{\theta} = \left(\frac{0.75 \theta}{V_{cr} (\text{std})} \right)^2 \left(\frac{\Delta H}{V_m (\text{std})} \right)$$

ORIFICE CHECKS: IF Y VARIATION EXCEEDS 2.00%, RECALIBRATE ORIFICE	GAMMA	RESULT	STATUS
	GAMMA 1	-1.07	OK
	GAMMA 2	-0.27	OK
	GAMMA 3	1.35	OK

- Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
- Record barometric pressure before and after calibration procedure.
- Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
- Record readings below, shaded columns are automatically calculated.



ONSITE METHOD 5 DRY GAS METER AUDIT AND POSTTEST CALIBRATION USING CRITICAL ORIFICE

Client Name	Covanta Projects, Inc.
Plant Name	Huntington Resource Recovery Facility
Plant City, State	East Northport, NY
Test Location	Units 1, 2, and 3 FF Outlets
Project Number	10731
Date of Pre-Test	08/01/10
Date of Post-Test	
Tester Signature	

Meterbox ID	T1
Meter Y	1.0163
Meter Delta Ha	1.765
Reference Pressure	29.8
Barometric Pressure	29.8
Pbar Pretest	29.8
Pbar Posttest	

ORIFICE ID# INCLUDING SET#	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT ³)	TEMPERATURES °F				DGM AVG	TIME (MIN) θ	DGM ΔH (in H ₂ O)	(1) V _m (STD)	(2) V _c (STD)	(3) Y	Y VARIATION (%)	QA STATUS
				AMB	DGM INLET INIT	DGM OUTLET INIT	DGM OUTLET FINAL								

PRETEST ONSITE 10 MINUTE AUDIT				PRE														
NA	1	NA	NA	505.500	512.891	NA	80	85	80	81	81.5	10.00	1.77	7.2062	NA	1.0301	1.36	PASS

POSTTEST CHECK		AVERAGE DELTA H = 		POST												
0	1	#N/A						0				0.0		0.0	#N/A	#N/A
0	2	#N/A	0	0.000		0	0	0	0	0	0	0.00	0.0	#N/A	#N/A	
0	3	#N/A	0	0.000		0	0	0	0	0	0	0.00	0.0	#N/A	#N/A	
FINAL - INITIAL VOLUMES > 5 CUBIC FEET? FAIL												Avg =	#N/A	#N/A	#N/A	

PRETEST PROCEDURES:

- 1) Record barometric pressure and temperatures before calibration.
- 2) Run 10 minute audit at Delta Ha without an orifice.
- 3) Record ambient temperature and compare all thermocouple readings.
- 4) Record thermocouple IDs and readings in table.

POSTTEST PROCEDURES:

- 1) Record barometric pressure before calibration.
- 2) Select one critical orifice to calibrate the dry gas meter which best approximates the operating range. Compare the average Delta H from your results page with the Delta H in the orifice table. Input orifice number.
- 3) Run at 18" Hg vacuum for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
- 4) Perform three repetitions for the posttest, record readings, shaded columns are automatically calculated.
- 5) Compare thermocouples to ambient and record as posttest calibration check.

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ONSITE METHOD 5 DRY GAS METER AUDIT AND POSTTEST CALIBRATION USING CRITICAL ORIFICE

Client Name	Covanta Projects, Inc.
Plant Name	Huntington Resource Recovery Facility
Plant City, State	East Northport, NY
Test Location	Units 1, 2, and 3 FF Outlets
Project Number	10731
Date of Pre-Test	08/01/10
Date of Post-Test	
Tester Signature	

Meterbox ID	T5
Meter Y	1.0028
Meter Delta Ha	1.739
Reference Pressure	29.8
Barometric Pressure	29.8
Pbar Pretest	29.8
Pbar Posttest	

ORIFICE ID# INCLUDING SET#	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT')	TEMPERATURES °F				ELAPSED TIME (MIN) θ	DGM ΔH (in H ₂ O)	(1) V _m (STD)	(2) V _{cr} (STD)	(3) Y	Y VARIATION (%)	QA STATUS
				AMB	DGM INLET INIT	DGM OUTLET INIT	DGM AVG							

PRETEST ONSITE 10 MINUTE AUDIT			PRE															
NA	1	NA	NA	927.400	935.024	NA	80	87	80	82	82.25	10.00	1.74	7.4226	NA	0.9993	0.35	PASS

POSTTEST CHECK		AVERAGE DELTA H =		POST														
0	1	#N/A		0	0	0	0	0	0	0	0	0	0	#N/A	#N/A			
0	2	#N/A	0	0.000		0	0	0	0	0	0	0	0	#N/A	#N/A			
0	3	#N/A	0	0.000		0	0	0	0	0	0	0	0	#N/A	#N/A			
FINAL - INITIAL VOLUMES > 5 CUBIC FEET?										FAIL					Avg = #N/A	#N/A	#N/A	#N/A

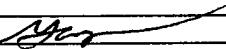
PRETEST PROCEDURES:

- 1) Record barometric pressure and temperatures before calibration.
- 2) Run 10 minute audit at Delta Ha without an orifice.
- 3) Record ambient temperature and compare all thermocouple readings.
- 4) Record thermocouple IDs and readings in table.

POSTTEST PROCEDURES:

- 1) Record barometric pressure before calibration.
- 2) Select one critical orifice to calibrate the dry gas meter which best approximates the operating range.
Compare the average Delta H from your results page with the Delta H in the orifice table. Input orifice number.
- 3) Run at 18" Hg vacuum for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
- 4) Perform three repetitions for the posttest, record readings, shaded columns are automatically calculated.
- 5) Compare thermocouples to ambient and record as posttest calibration check.

ONSITE METHOD 5 DRY GAS METER AUDIT AND POSTTEST CALIBRATION USING CRITICAL ORIFICE

Client Name	Covanta Projects, Inc.
Plant Name	Huntington Resource Recovery Facility
Plant City, State	East Northport, NY
Test Location	Units 1, 2, and 3 FF Outlets
Project Number	10731
Date of Pre-Test	08/01/10
Date of Post-Test	
Tester Signature	

Meterbox ID	T9	
Meter Y	0.9984	
Meter Delta Ha	1.550	
Reference Pressure	29.8	STATUS
Barometric Pressure	29.8	PASS
Pbar Pretest	29.8	
Pbar Posttest		

ORIFICE ID# INCLUDING SET#	K' FACTOR	TESTED VACUUM (in Hg)	DGM READINGS (FT ³)	TEMPERATURES °F				DGM AVG	TIME (MIN) θ	DGM ΔH (in H ₂ O)	(1) V _m (STD)	(2) V _{cr} (STD)	(3) Y	Y VARIATION (%)	QA STATUS
				AMB	DGM INLET	DGM OUTLET	INIT								
RUN #	(AVG)	(in Hg)	INITIAL FINAL	INIT	FINAL	INIT	FINAL	θ							

PRETEST ONSITE 10 MINUTE AUDIT			PRE															
NA	1	NA	NA	307.000	314.840	NA	83	85	82	83	83.25	10.00	1.55	7.6153	NA	0.9727	2.58	PASS

POSTTEST CHECK		AVERAGE DELTA H =	POST														
	1	#N/A							0				0.0	#N/A	#N/A		
0	2	#N/A	0	0.000	0	0	0	0	0	0.00	0.0	#N/A	#N/A				
0	3	#N/A	0	0.000	0	0	0	0	0	0.00	0.0	#N/A	#N/A	Avg =	#N/A	#N/A	#N/A

FINAL - INITIAL VOLUMES > 5 CUBIC FEET? FAIL

PRETEST PROCEDURES:

- 1) Record barometric pressure and temperatures before calibration.
- 2) Run 10 minute audit at Delta Ha without an orifice.
- 3) Record ambient temperature and compare all thermocouple readings.
- 4) Record thermocouple IDs and readings in table.

POSTTEST PROCEDURES:

- 1) Record barometric pressure before calibration.
- 2) Select one critical orifice to calibrate the dry gas meter which best approximates the operating range.
Compare the average Delta H from your results page with the Delta H in the orifice table. Input orifice number.
- 3) Run at 18" Hg vacuum for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
- 4) Perform three repetitions for the posttest, record readings, shaded columns are automatically calculated.
- 5) Compare thermocouples to ambient and record as posttest calibration check.



THERMOCOUPLE CALIBRATION DATA, °F

DATE	THERMOCOUPLE ID NUMBER	THERMOCOUPLE TEMPERATURE	REFERENCE TEMPERATURE	< Or = 2 degrees F DIFFERENCE ??
Dry Gas Meters:				
07/08/10	T1 IN	91	91	YES
07/08/10	T1 OUT	91	91	YES
07/08/10	T2 IN	90	91	YES
07/08/10	T2 OUT	91	91	YES
07/08/10	T3 IN	89	91	YES
07/08/10	T3 OUT	90	91	YES
07/08/10	T4 IN	89	91	YES
07/08/10	T4 OUT	89	91	YES
07/08/10	T5 IN	91	91	YES
07/08/10	T5 OUT	90	91	YES
07/08/10	T6 IN	90	91	YES
07/08/10	T6 OUT	90	91	YES
07/08/10	T7 IN	90	91	YES
07/08/10	T7 OUT	90	91	YES
07/08/10	T8 IN	91	91	YES
07/08/10	T8 OUT	91	91	YES
07/08/10	T9 IN	89	91	YES
07/08/10	T9 OUT	89	91	YES
07/14/10	TLF-1 IN	90	91	YES
07/14/10	TLF-1 OUT	90	91	YES
07/14/10	TLF-2 IN	91	91	YES
07/14/10	TLF-2 OUT	90	91	YES

Umbilical Arm Connectors				
07/07/10	G-0	88	89	YES
07/07/10	G-1	89	89	YES
07/07/10	G-2	88	89	YES
07/07/10	G-3	88	89	YES
07/07/10	G-4	88	89	YES
07/07/10	G-5	89	89	YES
07/07/10	G-6	89	89	YES
07/07/10	G-7	88	89	YES
07/07/10	G-8	88	89	YES
07/07/10	G-9	89	89	YES
07/07/10	G-10	88	89	YES
07/07/10	G-11	87	89	YES
07/07/10	G-12	87	89	YES

Probe Stack Thermocouples:

DATE	THERMOCOUPLE ID NUMBER	THERMOCOUPLE TEMPERATURE	REFERENCE TEMPERATURE	< or = 2 degrees F DIFFERENCE ??
07/14/10	141	81	81	YES
07/14/10	142	81	81	YES
07/14/10	143	81	81	YES
07/14/10	144	81	81	YES
07/14/10	145	82	82	YES
07/14/10	146	82	82	YES
07/14/10	148	82	82	YES
07/14/10	149	82	82	YES
07/14/10	150	82	82	YES
07/14/10	151	82	82	YES
07/14/10	152	82	82	YES
07/14/10	153	82	82	YES
07/14/10	154	82	82	YES
07/14/10	155	82	82	YES
07/14/10	156	82	82	YES
07/14/10	157	82	82	YES
07/14/10	158	82	82	YES
07/14/10	159	82	82	YES
07/14/10	160	82	82	YES
07/14/10	161	82	82	YES
07/14/10	162	83	83	YES
07/14/10	163	83	83	YES
07/14/10	164	83	83	YES
07/14/10	165	82	82	YES
07/14/10	166	83	83	YES
07/14/10	167	83	83	YES
07/14/10	168	83	83	YES
07/14/10	169	83	83	YES
07/14/10	170	83	83	YES
07/14/10	171	83	83	YES
07/14/10	173	83	83	YES
07/14/10	174	83	83	YES
07/14/10	197	79	81	YES
07/14/10	198	79	81	YES
07/14/10	199	83	82	YES
07/14/10	200	83	82	YES
07/14/10	201	83	83	YES
07/14/10	233	80	81	YES
07/14/10	234	80	81	YES
07/14/10	238	81	81	YES
07/14/10	538	81	81	YES
07/14/10	539	81	81	YES
07/14/10	595	81	81	YES
07/14/10	600	82	81	YES
07/14/10	601	81	81	YES



PITOT TUBE CALIBRATION - VERIFICATION OF CONSTRUCTION SPECIFICATIONS

Pitot ID: P-1161 Date: 3-27-78

Technician: GMH

1. D_t external tubing diameter $D_t = .375$ inches

$$0.188'' < D_t < 0.375'' \quad \bullet$$

$$2. \rho = \frac{\rho_A + \rho_B}{2}$$

$$\rho_A + \rho_B = 953 \text{ inches}$$

$$\rho = 4765 \text{ inches}$$

$$3. Z = (\rho_A + \rho_B) \sin \delta$$

$$\delta = 0^\circ$$

$$Z < 0.125'' \quad \bullet$$

$$Z = 0.0 \text{ inches}$$

$$4. W = (\rho_A + \rho_B) \sin \sigma$$

$$\sigma = 0^\circ$$

$$W < 0.031'' \quad \bullet$$

$$W = 0.0 \text{ inches}$$

$$5. \beta_A, \beta_B < 5^\circ \quad \bullet$$

$$\beta_A = 1^\circ$$

$$\beta_B = 1^\circ$$

$$6. \alpha_A, \alpha_B < 10^\circ \quad \bullet$$

$$\alpha_A = 4^\circ$$

$$\alpha_B = 3^\circ$$

* * Acceptable Limits.

* Standards of Performance for New Stationary Sources, Federal Register, 36 (247), December 23, 1971.

** Valbra, R.F., "The Effects of Impact Opening Misalignment on the Value of the Type-S Pitot Tube Coefficient", U.S. EPA Emission Measurement Branch, Research Triangle Park, N.C., October 1976

